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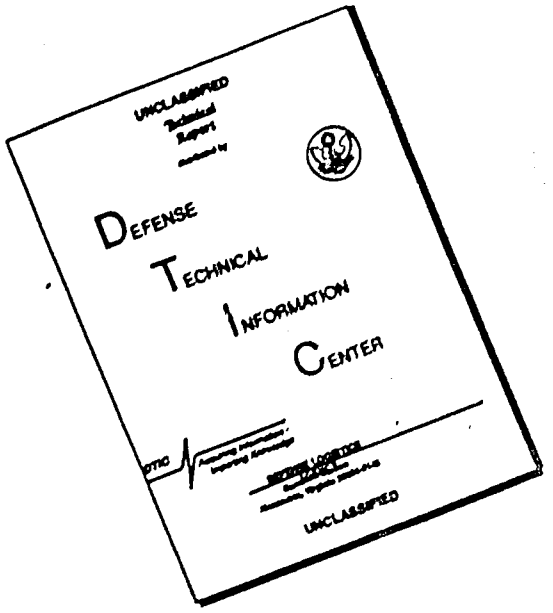

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WADD TECHNICAL NOTE 61-39

Structural Flight Loads Data from Jet-Tanker Operations

ELMER M. PERRY
JOHN F. RIEVLEY

STRUCTURES BRANCH
FLIGHT DYNAMICS LABORATORY

JANUARY 1961

WRIGHT AIR DEVELOPMENT DIVISION

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January 1961

Project No. 1367
Task No. 13637

WRIGHT AIR DEVELOPMENT DIVISION
AIR RESEARCH AND DEVELOPMENT COMMAND
UNITED STATES AIR FORCE
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

FOREWORD

This report was prepared in the Structural Loads Section, Structures Branch, Flight Dynamics Laboratory, Aeromechanics Division, Directorate of Advanced Systems Technology, Wright Air Development Division, Wright-Patterson Air Force Base, Ohio. Data acquisition and processing were accomplished by the University of Dayton Research Institute, Dayton, Ohio, under Air Force contract AF 33(616)-5406 and follow-on contract AF 33(616)-6719, Research and Development Project 1367, "Structural Design Criteria," Task 13637, "Collection and Statistical Analysis of Structural Flight Data." Mr. Cyril G. Peckham was the contractor supervisor. The authors, Messrs. John F. Rievley and Elmer M. Perry of the Flight Dynamics Laboratory, were the engineers in charge of the basic research and development work.

The data upon which this report is based were collected on three KC-135A aircraft from January 1959 to March 1960 while these aircraft were based at Castle Air Force Base and another three KC-135A aircraft from January 1959 to February 1960 while these latter aircraft were based at Walker Air Force Base.

Acknowledgement is made of the assistance lent the authors during this program by personnel of the Strategic Air Command, the Air Materiel Command, and the University of Dayton Research Institute.

ABSTRACT

Structural flight loads data from Strategic Air Command KC-135A aircraft performing normal aerial refueling missions and aerial refueling training flights are presented in this report. The information gathered from this program will be used to verify or refine the load spectrum and should result in improved structural design criteria for future weapon systems.

PUBLICATION REVIEW

This report has been reviewed and is approved.

FOR THE COMMANDER:

JOHN P. TAYLOR
Colonel, USAF
Chief, Flight Dynamics Laboratory

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LIST OF SYMBOLS

C_{N_a}	-	Normal lift coefficient
g	-	Unit of acceleration (load factor) due to gravity, 32.2 feet per second per second
K_w	-	Dimensionless gust factor (MIL-A-8861)
KIAS	-	Indicated airspeed, knots
m	-	Slope of lift curve, per radian
n_z	-	Normal load factor, g's
Δn_z	-	Incremental normal load factor, g's
S	-	Wing area, square feet
U_{d_e}	-	Derived equivalent gust velocity, feet per second

$$U_{d_e} = \frac{498\ W \Delta n}{K_w\ V_e\ m\ S}$$

V_D	-	Dive speed, knots
V_e	-	Equivalent airspeed, knots
V_H	-	Level flight high speed, knots
W	-	Aircraft gross weight, pounds

SECTION I

INTRODUCTION

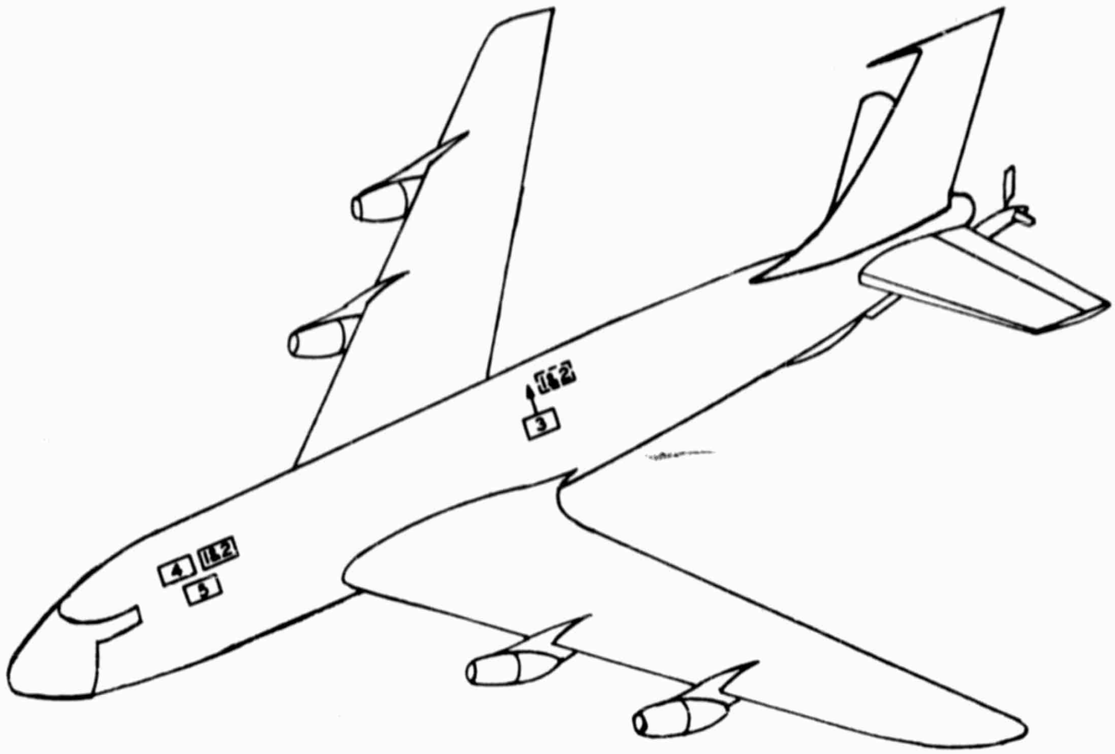
The rash of fatigue failures which occurred on aircraft structural components during 1958 made it necessary to accelerate the flight load recording program to determine and improve the fatigue life of USAF aircraft and to refer design criteria to the development of future flight vehicles. The current high-performance design concept, which has resulted in more flexible wings, and increased efficiency in structural design coupled with operation at overload weights and low altitudes have contributed materially to this critical condition. Although improvement in aircraft design from a fatigue standpoint is not likely on current aircraft; it is imperative to collect flight load data on USAF aircraft in service and evaluate these data in terms of aircraft life for the development of design criteria applicable to future flight vehicles.

This requirement for a more accurate knowledge of the structural fatigue and aircraft life was also responsible for the initiation of the "USAF Aircraft Structural Integrity Program" which involves the collection of in-service loads, flight testing, development of test spectra, and repeated load tests. This Laboratory is primarily concerned with the in-service load collection, flight test, and spectra development phases. Technically, the purpose of the "USAF Aircraft Structural Integrity Program" is to increase Air Force technical knowledge of structural fatigue criteria, to establish design load parameters for new aircraft, to determine structural modification requirements for existing aircraft, to accurately project inspection requirements, and to provide tactical commanders with technical data for planning new mission concepts.

In order to achieve these objectives, this Laboratory is responsible for instrumenting current and new USAF operational aircraft to record flight load data and then to analyze these data for development of fatigue spectra and criteria. A minimum of 1000 hours of realistic flight load data is generally required for each airplane type while performing normal operational missions. In addition, special tests are being conducted to provide a world model of turbulence. Results of these studies will enable the development of realistic dynamic loading fatigue test spectra which will be expressed as cycles of load at various load levels. These spectra will, in turn, be utilized in repeated load tests.

Due to the rash of failures which occurred on aircraft structural components during 1958, it was recommended by Wright Air Development Division to Air Research and Development Command and Air Material Command that a recording program be initiated on the KC-135A aircraft. Consequently, a flight loads program was initiated at Castle and Walker Air Force Bases to gather maneuver and gust load data.

Boeing Airplane Company, Seattle Division, had currently established a program to reduce and process maneuver loads data from KC-135 aircraft. It was determined that these programs (Boeing, Wright Air Development Division Flight Loads Recording Program) would be made compatible.



LEGEND

INDICATES FORCE FOR POSITIVE ACCELERATION
1 - OSCILLOGRAPH - BRIDGE BALANCE
2 - GAGE SUPPLY
3 - ACCELEROMETER - VERTICAL
4 - AIRSPEED AND ALTITUDE TRANSDUCERS
5 - LANDING GEAR SAFETY SWITCH RELAY
EQUIPMENT LOCATION ON WALKER AIRCRAFT
EQUIPMENT LOCATION ON CASTLE AIRCRAFT

Figure 1. External Configuration of KC-135

SECTION II

DISCUSSION

A. General Discussion

A total of 1167 hours of usable data was collected from the KC-135A aircraft at Castle and Walker Air Force Bases. The acquired data consisted of 556.3 hours collected from Castle Air Force Base and 610.7 hours collected from Walker Air Force Base.

Among the types of missions flown were: navigation, training, transition, refueling, and test. The historical data table indicated a large percentage

of time was spent during training missions. Although desirable, it was not possible to separate the training missions from other types, neither by inspection of the acceleration traces nor by the information contained on the log sheet.

B. Instrumentation

The recording system consisted of Model 409 Century oscillographs and Model 1809 Century bridge control units. These instruments recorded a continuous time history on photographic paper sensitized by the reflected light from mirrors mounted on very sensitive galvanometers. Although twelve channels of information could have been recorded, only four of these were employed to transcribe velocity, acceleration, and altitude versus time information. These instruments were installed in three KC-135A aircraft stationed at Walker AFB, New Mexico, and in another three KC-135A aircraft stationed at Castle Air Force Base, California, from January 1959 to March 1960.

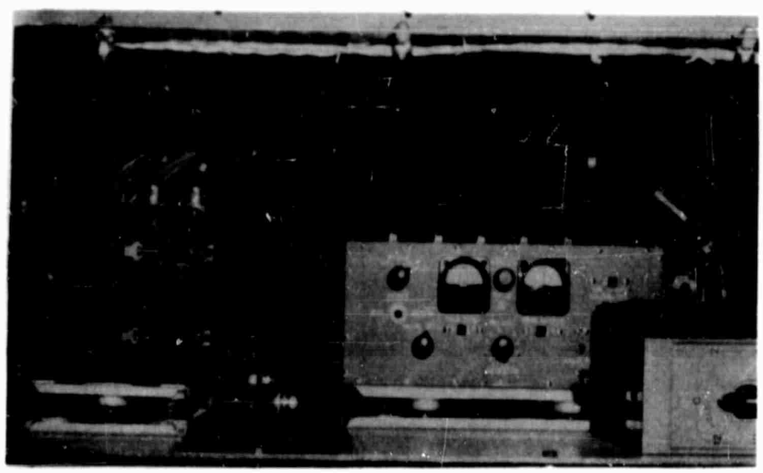


Figure 2. Recording Equipment Located in Castle Aircraft

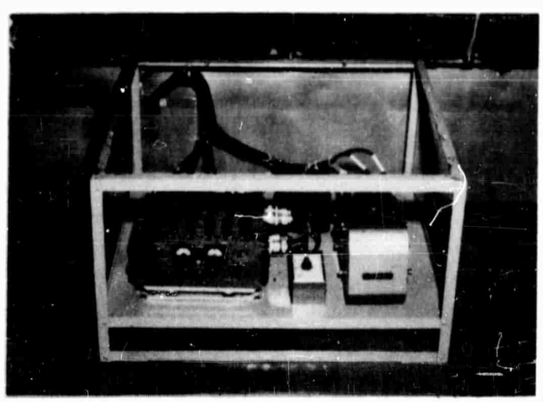


Figure 3. Recording Equipment Located in Walker Aircraft

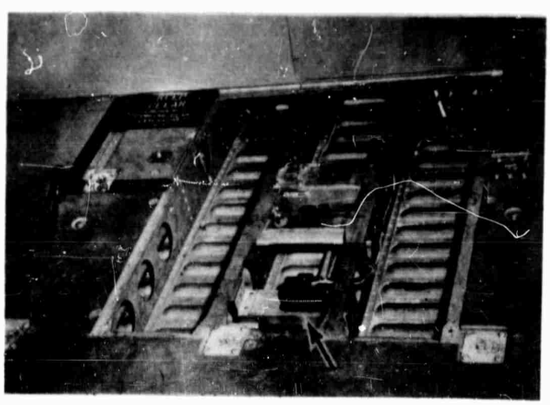


Figure 4. Accelerometer Located in Cargo Area

C. Data Reduction

The data were read from the oscillograph chart by employing the semi-automatic Benson-Lehner Oscar oscillograph reader. Data which were read from the airspeed, altitude, and acceleration traces depended on the occurrence of significant acceleration trace deflections. The 1.0 g line served as the norm from which acceleration deflections were read. Two threshold levels, one above the norm at 1.1 g and the other below the norm at 0.9 g, determined the acceleration deflections to be measured. Airspeed and altitude trace deflections were read coincident with significant acceleration deflections.

Any acceleration trace departing from the norm which crossed either of the thresholds and then returned to the norm within 2 seconds was attributed to a gust. In each instance of either positive or negative deflection from the norm, only the point of maximum deviation from the norm was measured.

Any acceleration deflection departing from the norm which crossed either of the thresholds and then returned to the norm after 2 seconds was attributed to a maneuver. While there was one reading in each instance at the point of maximum departure from the norm, i. e., the so-called "primary maneuver peak," other peaks, termed "secondary maneuver peaks," were read if a condition was fulfilled with each. This condition was that each of the vertical displacements from the preceding valley (peak) to the peak (valley) and from the peak (valley) to the following valley (peak) measured a minimum of 0.1 g.

It has been estimated that the error in the data presented in this report should not exceed 8 percent.

D. Method of Analysis

Probability curves were constructed using the cumulative frequency of occurrence of an acceleration in excess of a given acceleration experienced as a function of time, i.e., the number of minutes of flight time necessary before one such acceleration would be expected to occur. These values of flight time were plotted on semi-log paper versus the given acceleration, and a curve was drawn through the points. The plot resembles, generally, a Pearson Type I or III curve depending on the type of distribution provided by the data.

Using the same method above, probability curves for gust were constructed using the cumulative frequency of occurrence of a gust velocity in excess of a given gust velocity as a function of statute miles, that is, the number of statute miles of flight necessary before one such gust velocity would be expected to occur.

To further illustrate the operational comparisons of the missions flown at the two bases, histograms showing the percentages of flight time spent at selected altitude and airspeed ranges are presented in Figures 12, 13, 14, and 15.

A comparison of load factors resulting from maneuver and gust loads is shown in Figures 8 and 9.

The derived gust velocities were computed from the equation $U_{de} = \frac{498\ W \Delta n}{K_w V_e m S}$ (MIL-A-8861) using incremental load factors due to gust and maneuvers. This type aircraft was designed to withstand gusts up to 65 feet per second at the recommended slow down speed for gust penetration and gusts up to 50 feet per second at the maximum limit speed of the aircraft (350 KIAS). A review of the data gathered in this program indicates that no 50-feet-per-second gusts were encountered. The maximum gust velocity recorded during this program was 47 feet per second.

Tabulations of the distribution of maneuver load factors, gust load factors, and derived gust velocity by equivalent airspeed by gross weight within altitude ranges are presented in Tables 1 through 40.

SECTION III

SUMMARY AND CONCLUSIONS

A general summary and conclusions relative to the acquired data from each Air Force base are presented below.

A. Data Collected at Castle Air Force Base

1. The histogram in Figure 12 indicates that 45.9 percent of the total flight time was expended within the 30,000- to 40,000-foot altitude range. The 747 "touch and go" landings account for the 21.7 percent of total flight time expended within the 0- to 5,000-foot altitude range. Although 45.9 percent of the total flight time was expended within the 30,000- to 40,000-foot range, of the total of 12,004 accelerations (g) experienced as a result of gust encounters at all altitudes, 9,234 of these occurred within the 0- to 5,000-foot range.

2. The histogram in Figure 14 indicates that 37.6 and 38.6 percent of the time was spent in the 200- to 250-knot and the 250- to 300-knot ranges, respectively.

B. Data Collected at Walker Air Force Base

1. The histogram in Figure 13 indicates that 46.5 percent of the total flight time was expended within the 30,000- to 40,000-foot altitude range.

2. The histogram in Figure 15 indicates that 58 percent of the total flight time was expended within the 200- to 250-knot range.

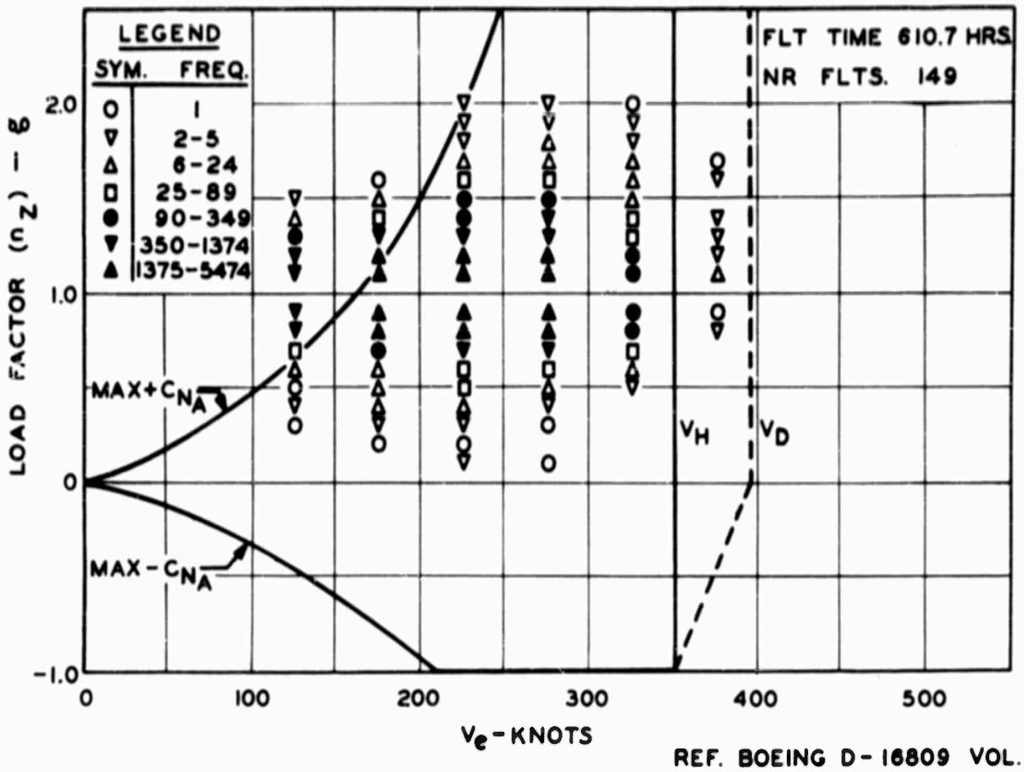
C. General Comparisons

1. The histograms indicate that the operational altitude of the aircraft at the two bases was within the 30,000- to 40,000-foot range.

2. The probability curves in Figure 8 indicate that the maneuver load data acquired from Walker AFB were more severe than the data acquired from Castle AFB.

3. The probability curves in Figure 9 indicate no appreciable difference between the accelerations due to gusts experienced by the aircraft at Walker AFB and at Castle AFB up to the first 2000 minutes of the respective flight times. After the 2000-minute period the accelerations due to gusts experienced by the aircraft at Castle AFB became more severe than the accelerations experienced by the aircraft at Walker AFB.

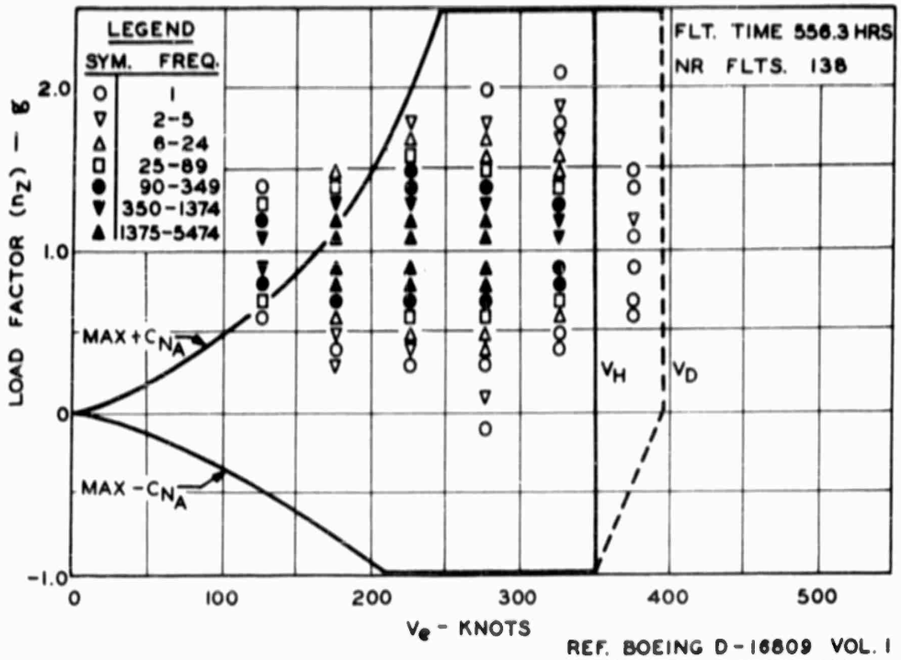
4. From observation of the probability curves in Figures 10 and 11, the derived gust velocities based on maneuver loads are more severe than those based on gust loads.



REF. BOEING D-16809 VOL. I
22,000 FT. - 245,000 LB.

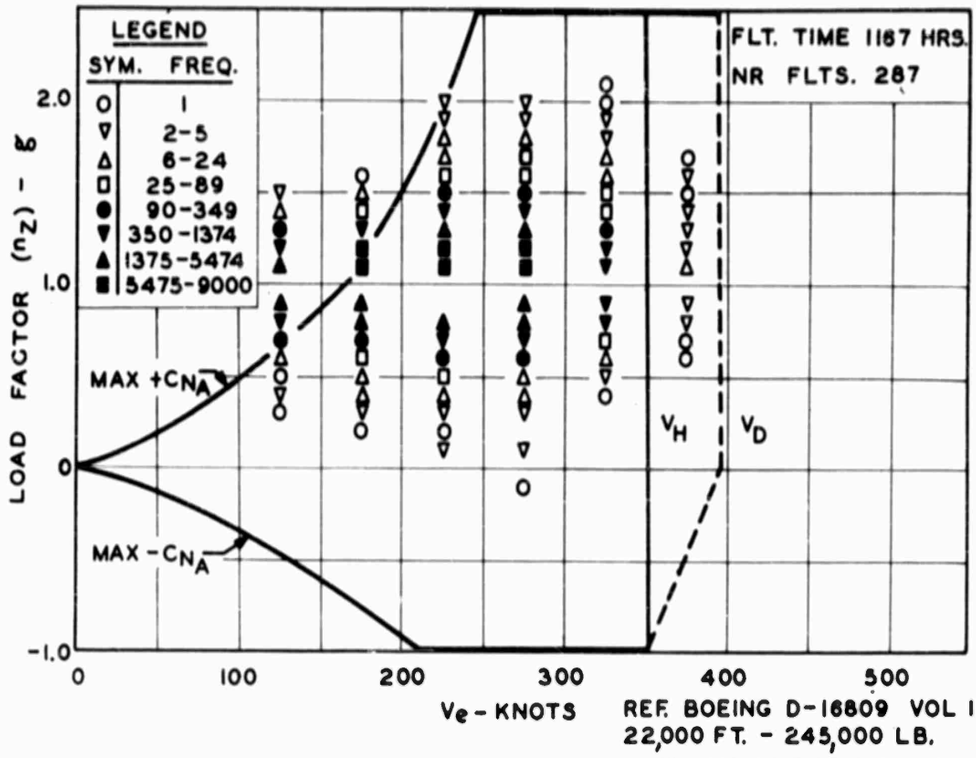
AIRSPEED-V_e (K) / LOAD FACTOR (n)	100 TO 149	150 TO 199	200 TO 249	250 TO 299	300 TO 349	350 TO 399	400 TO 449	450 TO 499	TOTAL
0.05 TO 0.14			2	1					3
0.15 TO 0.24		1	1						2
0.25 TO 0.34	1	2	3	1					7
0.35 TO 0.44	2	8	15	5					30
0.45 TO 0.54	1	8	32	17	2				60
0.55 TO 0.64	8	23	85	82	9				207
0.65 TO 0.74	77	208	460	427	40				1212
0.75 TO 0.84	767	1660	2327	2046	151	4			6955
0.85 TO 0.90	1019	1658	3109	2767	156	1			8710
1.10 TO 1.14	1373	2703	4584	4674	267	6			13607
1.15 TO 1.24	830	2803	3450	3811	177	2			11073
1.25 TO 1.34	123	542	1163	1352	88	2			3270
1.35 TO 1.44	11	48	281	386	40	2			768
1.45 TO 1.54	2	6	97	127	16				248
1.55 TO 1.64		1	39	38	10	2			90
1.65 TO 1.74			12	17	7	1			37
1.75 TO 1.84			3	7	3				13
1.85 TO 1.94			3	4	2				9
1.95 TO 2.04			3	4	1				8
TOTAL	4214	9671	15669	15766	969	20			46309

Figure 5. V-n Diagram and Tabulation of Gusts and Maneuvers, KC-135A Castle AFB



AIRSPEED-V_e (K) / LOAD FACTOR (g)	100 TO 149	150 TO 199	200 TO 249	250 TO 299	300 TO 349	350 TO 399	TOTAL
-0.05 TO -0.14				1			1
0.04 TO -0.04							
0.05 TO 0.14				2			2
0.15 TO 0.24							
0.25 TO 0.34		2	1	1			4
0.35 TO 0.44		1	5	7	1		14
0.45 TO 0.54		3	12	6	1		22
0.55 TO 0.64	1	17	49	40	12	1	120
0.65 TO 0.74	37	130	242	196	33	1	639
0.75 TO 0.84	305	1668	1528	1442	222		5165
0.85 TO 0.90	486	2815	2457	2423	258	1	8440
1.10 TO 1.14	670	5163	3373	3520	426	1	13153
1.15 TO 1.24	326	4854	3066	3248	459	3	11956
1.25 TO 1.34	32	642	1091	958	134		2857
1.35 TO 1.44	1	40	251	259	45	1	597
1.45 TO 1.54		6	95	80	19	1	201
1.55 TO 1.64			34	22	9		65
1.65 TO 1.74			9	8	3		20
1.75 TO 1.84			4	4	1		9
1.85 TO 1.94					2		2
1.95 TO 2.04				1			1
2.05 TO 2.14					1		1
TOTAL	1858	15341	12217	12218	1626	9	43269

Figure 6. V-n Diagram and Tabulation of Gusts and Maneuvers, KC-135A Walker AFB



AIRSPEED-V_e (K) / LOAD FACTOR(ζ)	100 TO 149	150 TO 199	200 TO 249	250 TO 299	300 TO 349	350 TO 399	TOTAL
-0.05 TO -0.14				1			1
0.04 TO -0.04							
0.05 TO 0.14			2	3			5
0.15 TO 0.24		1	1				2
0.25 TO 0.34	1	4	4	2			11
0.35 TO 0.44	2	9	20	12	1		44
0.45 TO 0.54	1	11	44	23	3		82
0.55 TO 0.64	9	40	134	122	21	1	327
0.65 TO 0.74	114	338	702	623	73	1	1651
0.75 TO 0.84	1072	3328	3655	3488	373	4	12120
0.85 TO 0.90	1505	4473	5566	5190	414	2	17150
1.10 TO 1.14	2043	7866	7957	8194	693	7	26760
1.15 TO 1.24	1156	7657	6516	7059	636	5	23029
1.25 TO 1.34	155	1184	2254	2310	222	2	6127
1.35 TO 1.44	12	68	532	645	85	3	1365
1.45 TO 1.54	2	12	192	207	35	1	449
1.55 TO 1.64		1	73	60	19	2	155
1.65 TO 1.74			21	25	10	1	57
1.75 TO 1.64			7	11	4		22
1.85 TO 1.94			3	4	4		11
1.95 TO 2.04			3	5	1		9
2.05 TO 2.14					1		1
TOTAL	6072	25012	27886	27984	2595	29	89578

Figure 7. V-n Diagram and Tabulation of Gusts and Maneuvers, Composite of Castle and Walker AFB's

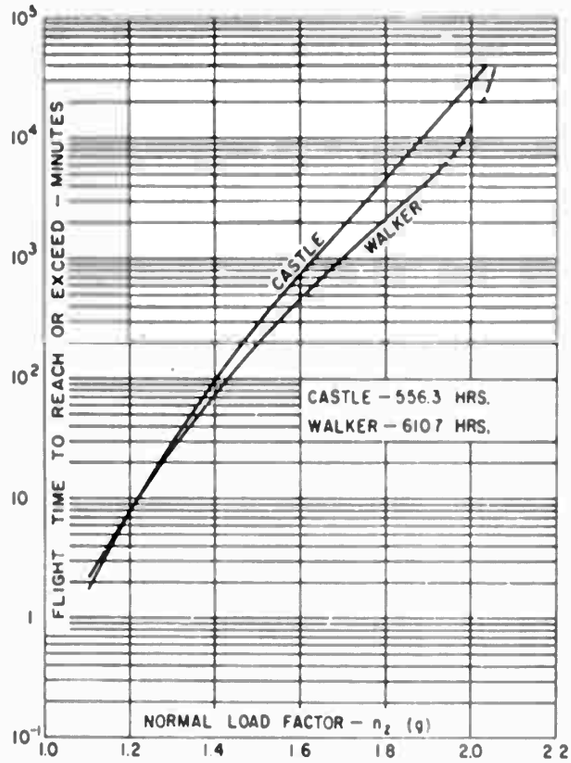


Figure 8. Probability Curves - Maneuver Loads, Comparison of Castle and Walker AFB's

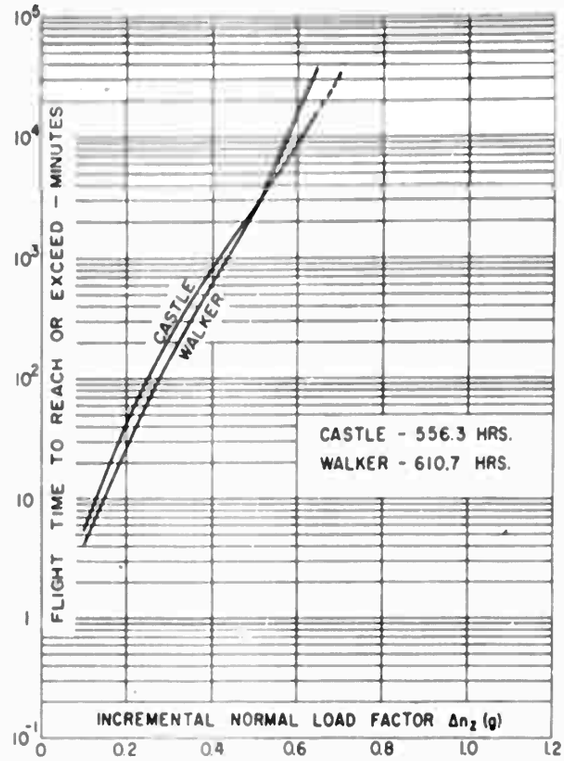


Figure 9. Probability Curves - Gust Loads, Comparison of Castle and Walker AFB's

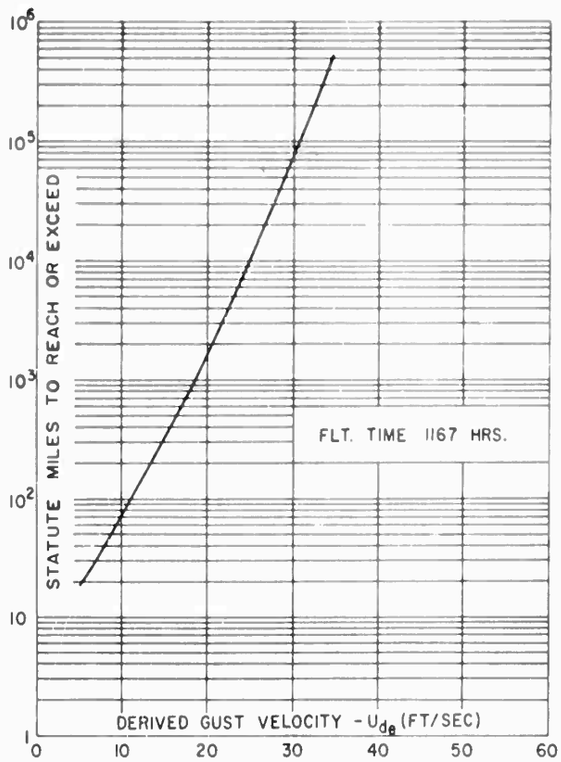


Figure 10. Probability Curve - Gust Velocity by Gust Load Factor, Composite of Castle and Walker AFB's

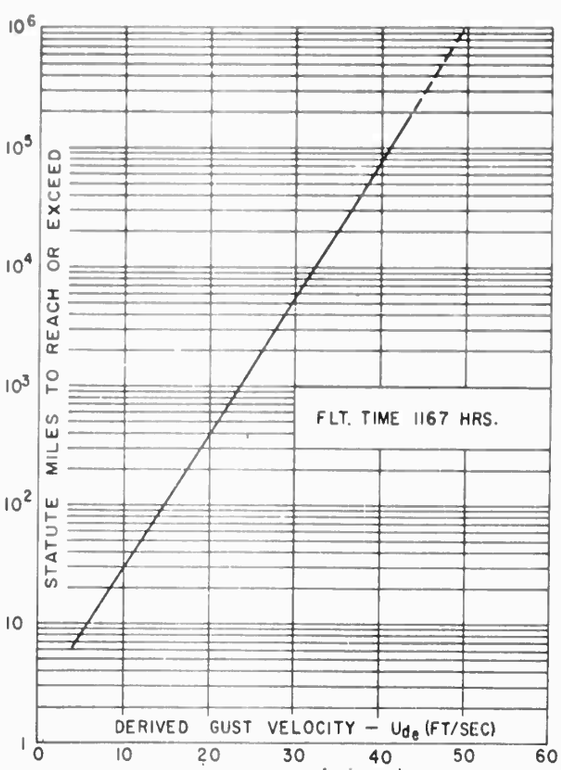


Figure 11. Probability Curve - Gust Velocity by Gust and Maneuver Load Factor, Composite of Castle and Walker AFB's

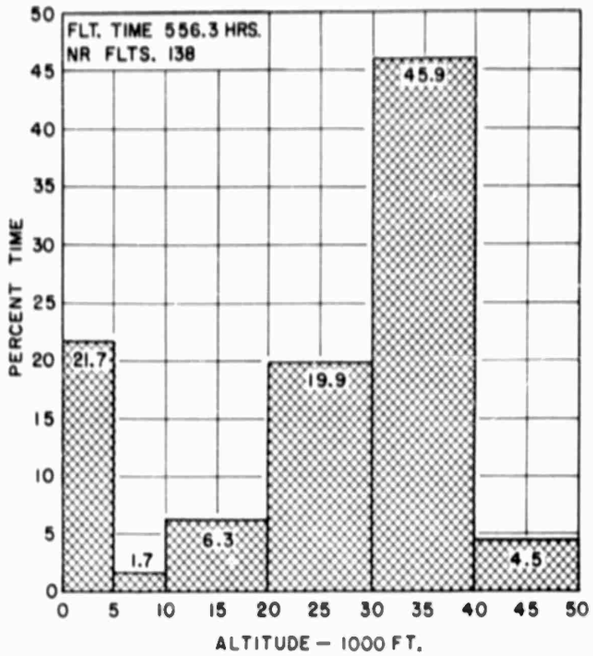


Figure 12. Percent of Total Flight Spent at Selected Alitudes Castle AFB

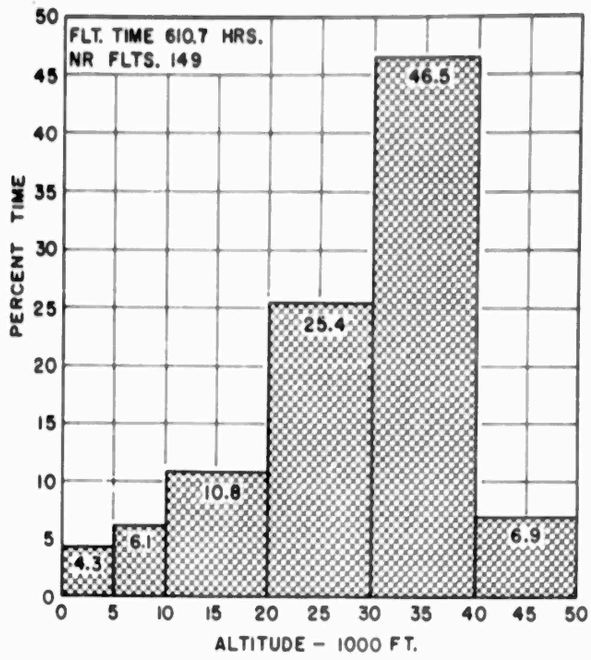


Figure 13. Percent of Total Flight Spent at Selected Altitudes, Walker AFB

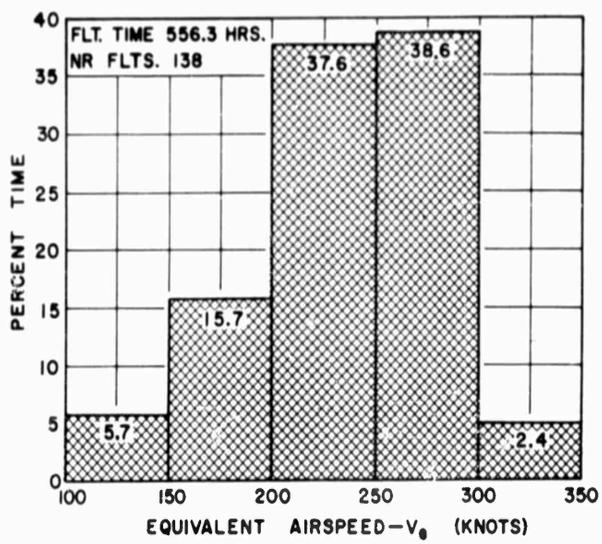


Figure 14. Percent of Total Flight Spent at Selected Airspeeds, Castle AFB

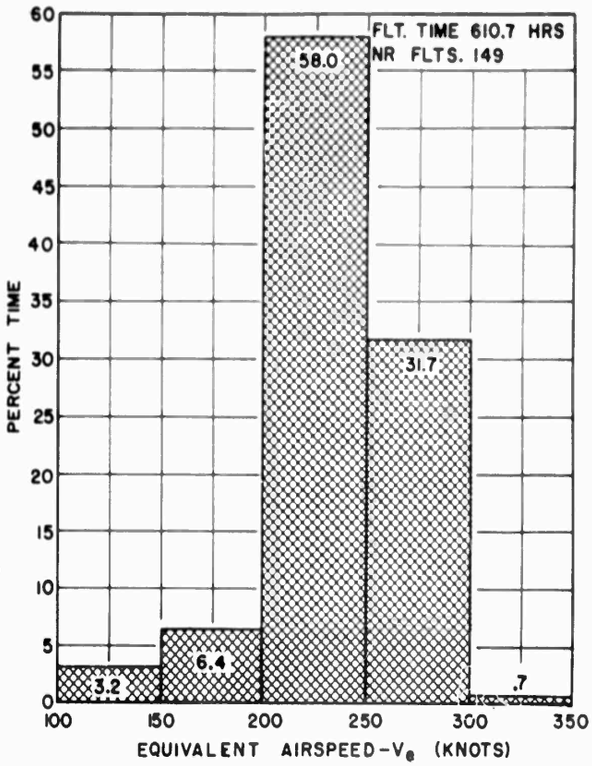


Figure 15. Percent of Total Flight Spent at Selected Airspeeds, Walker AFB

TABLE 1
Castle AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 0 to 1,000 feet

Gross Weight: 110,000 to 140,000 — Incremental Load Factor Δn_s (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_s (g)	Flt. Time (Min.)
100 to 150									1	4	2								7	18.3
150 to 200																				13.2
200 to 250																				.1
Totals									1	4	2								7	31.6

Gross Weight: 140,000 to 170,000 — Incremental Load Factor Δn_s (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_s (g)	Flt. Time (Min.)
100 to 150						1	5	26	66	94	42	2							236	440.3
150 to 200						1	7	106	119	220	130	12	1	2					598	354.4
200 to 250								4	14	8	5								31	10.5
250 to 300							2		6	5	3								16	1.3
300 to 350																				.1
Totals						2	14	136	205	327	180	14	1	2					881	806.6

Gross Weight: 170,000 to 200,000 — Incremental Load Factor Δn_s (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_s (g)	Flt. Time (Min.)
100 to 150							3	22	94	74	58	10							201	875.7
150 to 200						1	13	159	359	535	285	24	2						1378	969.7
200 to 250								2	14	8	7	3							34	20.1
250 to 300																				.3
Totals						1	16	183	427	617	330	37	2						1613	1865.8

Gross Weight: 200,000 to 230,000 — Incremental Load Factor Δn_s (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_z (g)	Flt. Time (Min.)
100 to 150									2										2	6.6
150 to 200								7	21	10	5								43	35.7
200 to 250								4	15	6	3								28	11.3
250 to 300								3	5	3									11	2.3
300 to 350																				.1
Totals								14	43	19	8								84	56.0

Gross Weight: 230,000 to 260,000 — Incremental Load Factor Δn_z (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_z (g)	Flt. Time (Min.)
100 to 150																				2.2
150 to 200								1		3									4	8.7
200 to 250									2	3	1								6	7.9
250 to 300								1	1										2	1.4
300 to 350									1		2								3	.4
Totals								2	4	6	3								15	20.6

Gross Weight: 260,000 to 290,000 — Incremental Load Factor Δn_z (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_z (g)	Flt. Time (Min.)
100 to 150																				.3
150 to 200																				.6
Totals																				.9

TABLE 2
Castle AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 1,000 to 2,500 feet

Gross Weight 110,000 to 140,000	Incremental Load Factor Δn_s (g)																Total No Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
100 to 150									1	4									5	25.8
150 to 200										1	2	3							6	19.7
200 to 250								1	1	1	2		1	1	1				8	4.2
250 to 300																				.7
Totals								1	2	6	4	3	1	1	1				19	50.4

Gross Weight 140,000 to 170,000	Incremental Load Factor Δn_s (g)																		Total No Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
100 to 150							2	59	88	75	19	2							225	216.3
150 to 200						2	12	102	280	411	234	84	1						1126	670.9
200 to 250						1	2	38	37	38	34	5	1						156	93.6
250 to 300						1	5	31	26	51	42	11	1						168	20.1
300 to 350							3	10	4	11	9	5	2	1					45	4.3
Totals						4	24	300	415	586	338	107	5	1					1720	965.2

Gross Weight 170,000 to 200,000	Incremental Load Factor Δn_s (g)																		Total No Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	3	4	.5	6	.7	8	.9		
100 to 150							4	23	35	31	14								107	275.7
150 to 200					1	2	14	321	572	815	570	42	4						2341	2126.2
200 to 250							1	34	42	36	24	6	2						145	99.4
250 to 300						2	5	11	23	36	23	3	2						105	40.3
300 to 350									4	1	4	1							10	2.2
Totals					1	4	24	389	676	919	635	52	8						2708	2543.8

Gross Weight 200,000 to 230,000	Incremental Load Factor Δn_s (g)																		Total No Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	4	.5	.6	.7	.8	.9		
100 to 150																				2.6
150 to 200								1	5	4	3								13	24.1
200 to 250							1	11	24	14	4	1							55	16.2
250 to 300				1			2	20	38	38	29	2	1						131	28.8
300 to 350							1	3	5	6	5	2							22	6.5
Totals				1			4	35	72	62	41	5	1						221	78.2

Gross Weight 230,000 to 260,000	Incremental Load Factor Δn_s (g)																		Total No Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
150 to 200																				.8
200 to 250									1	1									2	5.4
250 to 300								5	4	2	1								12	13.5
300 to 350									4	3									7	3.1
Totals								5	9	6	1								21	22.8

Gross Weight: 260,000 to 290,000	Incremental Load Factor Δn_z (g)																		Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
250 to 300																				.8
Totals																				.8

TABLE 3
Castle AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 2,500 to 5,000 feet

Gross Weight: 110,000 to 140,000 — Incremental Load Factor Δn_g (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_g (g)	Flt. Time (Min.)
100 to 150								2	2	2									6	.9
150 to 200								1	1	2	1		1						6	3.4
200 to 250									1										1	5.8
250 to 300																				3.3
Totals								3	4	4	1		1						13	13.4

Gross Weight 140,000 to 170,000 — Incremental Load Factor Δn_g (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	4	.5	.6	.7	.8	.9	Total No Δn_g (g)	Flt. Time (Min.)
100 to 150								1	2	1									4	.6
150 to 200								14	22	16	5								57	50.1
200 to 250							1	2	3	8	3	1							18	20.1
250 to 300						1	1	12	17	22	8	5		1					67	48.7
300 to 350						2	4	6	7	13	6	2	2	1					43	12.9
350 to 400																				1.7
Totals						3	6	35	51	60	22	8	2	2					189	134.1

Gross Weight 170,000 to 200,000 — Incremental Load Factor Δn_g (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	4	.5	6	.7	.8	.9	Total No Δn_g (g)	Flt. Time (Min.)
100 to 150									11	9	2								22	19.1
150 to 200						1	5	60	102	173	43	1							385	426.5
200 to 250								8	14	19	21	3	1						66	49.0
250 to 300						1	1	9	26	18	16		2						73	60.3
300 to 350							2	10	11	7	12	3	3	1	1				50	8.9
350 to 400																				.6
Totals						2	8	87	164	226	94	7	6	1	1				596	564.4

Gross Weight 200,000 to 230,000 — Incremental Load Factor Δn_z (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_z (g)	Flt. Time (Min.)
150 to 200									1	1	1								3	29.8
200 to 250																				2.3
250 to 300							2	6	18	13	7	2	3		1				52	45.8
300 to 350									1	3	2								6	20.8
Totals							2	6	20	17	10	2	3		1				1	98.7

Gross Weight 230,000 to 260,000 — Incremental Load Factor Δn_z (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_z (g)	Flt. Time (Min.)
200 to 250																				.4
250 to 300									2										2	21.5
300 to 350								3											3	6.3
Totals								3	2										5	28.2

Gross Weight: 260,000 to 290,000 — Incremental Load Factor Δn_z (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_z (g)	Flt. Time (Min.)
250 to 300																				1.3
Totals																				1.3

TABLE 4
Castle AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range. 5,000 to 10,000 feet

Gross Weight 110,000 to 140,000	Incremental Load Factor Δn_g (g)																	Total No Δn_g (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
100 to 150																			.1
150 to 200																			2.4
200 to 250																			11.1
250 to 300																			3.8
300 to 350																			2.2
Totals																			19.6

Gross Weight 140,000 to 170,000	Incremental Load Factor Δn_g (g)																	Total No Δn_g (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	4	.5	.6	.7	8	9	
200 to 250									1										1	7.0
250 to 300							1	8	21	10	10	2							52	73.2
300 to 350							1	6	7	13	6								33	24.9
350 to 400																				.1
Totals							2	14	29	23	16	2							86	105.2

Gross Weight 170,000 to 200,000	Incremental Load Factor Δn_g (g)																	Total No Δn_g (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
100 to 150																			.3
150 to 200									1	6	1								8	24.0
200 to 250								1		1									2	21.3
250 to 300							1	11	15	17	10	3	1						58	130.8
300 to 350								1		4	3								8	8.7
Totals							1	13	16	28	14	3	1						76	215.1

Gross Weight 200,000 to 230,000	Incremental Load Factor Δn_g (g)																	Total No Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
200 to 250																			5.0
250 to 300								4	5	8	2								19	117.3
300 to 350								5	6	3	3								17	38.6
Totals								9	11	11	5								36	160.9

Gross Weight 230,000 to 260,000	Incremental Load Factor Δn_z (g)																	Total No Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
200 to 250																			2.3
250 to 300									3	1									4	43.5
300 to 350								1	4	4									9	14.1
Totals								1	7	5									13	59.9

Gross Weight: 260,000 to 290,000	Incremental Load Factor Δn_z (g)																	Total No Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
250 to 300								2	7	1									10	3.1
Totals								2	7	1									10	3.1

TABLE 5
Castle AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 10,000 to 20,000 feet

Gross Weight 110,000 to 140,000	Incremental Load Factor Δn_g (g)																Total No. Δn_g (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
100 to 150																				3.6
150 to 200																				20.3
200 to 250										1									1	133.7
250 to 300																				4.3
300 to 350																				6.6
Totals										1									1	168.5

Gross Weight 140,000 to 170,000	Incremental Load Factor Δn_g (g)																Total No. Δn_g (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	4	.5	.6	.7	.8	.9		
100 to 150																				4.0
150 to 200																				7.1
200 to 250									2		1								3	131.5
250 to 300					2	1	14	21	14	17	3	1							73	187.4
300 to 350								1	1	6									8	60.4
Totals					2	1	15	24	20	18	3	1							84	390.4

Gross Weight 170,000 to 200,000	Incremental Load Factor Δn_g (g)																Total No Δn_g (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	4	.5	.6	.7	.8	.9		
100 to 150																				.1
150 to 200									1										1	43.8
200 to 250					1		4	9	6	13	9	2	2						46	457.1
250 to 300						1	3	5	21	14	11	3	1						59	369.0
300 to 350									1	4	2								7	21.6
350 to 400																				.6
Totals					1	1	7	14	29	31	22	5	3						113	888.2

Gross Weight 200,000 to 230,000	Incremental Load Factor Δn_g (g)																Total No. Δn_g (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
150 to 200																				7.9
200 to 250							2	1	3	3	4		1						14	82.5
250 to 300								7	20	11	6	2		1					47	323.3
300 to 350						1		12	14	19	11	1	1						59	92.6
Totals						1	2	20	37	33	21	3	2	1					120	506.3

Gross Weight 230,000 to 260,000	Incremental Load Factor Δn_z (g)																Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
200 to 250																				4.5
250 to 300							1	3	9	5									18	103.9
300 to 350								1		1									2	28.0
Totals							1	4	9	6									20	136.4

Gross Weight: 260,000 to 290,000	Incremental Load Factor Δn_z (g)																Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
250 to 300										1									1	7.1
Totals										1									1	7.1

TABLE 6
Castle AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 20,000 to 30,000 feet

Gross Weight: 110,000 to 140,000	Incremental Load Factor Δn_s (g)																Total No. Δn_s (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
100 to 150																				.1
150 to 200																				44.6
200 to 250							1		2	2	1	3	1			1			11	134.8
250 to 300						2	2	6	7	9	2		1			1			30	90.1
300 to 350										9	1								10	22.0
Totals						2	3	6	9	20	4	3	2			2			51	291.6

Gross Weight 140,000 to 170,000	Incremental Load Factor Δn_s (g)																Total No Δn_s (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
150 to 200										1	1								2	41.9
200 to 250								6	18	12	14	2	1						53	862.2
250 to 300							2	8	34	42	24	3	1	1					115	1317.4
300 to 350									25	13	22	4							64	103.2
Totals							2	14	77	68	61	9	2	1					234	2324.7

Gross Weight 170,000 to 200,000	Incremental Load Factor Δn_s (g)																Total No. Δn_s (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
150 to 200																				6.8
200 to 250					1		4	26	20	33	19	2	3	2					110	648.5
250 to 300							1	9	14	19	11	2			1				57	1386.8
300 to 350						1	1		1		1								4	91.5
Totals					1	1	6	35	35	52	31	4	3	2	1				171	2133.6

Gross Weight: 200,000 to 230,000	Incremental Load Factor Δn_s (g)																Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
150 to 200																				.4
200 to 250										3									3	223.4
250 to 300						1	3	13	31	39	12	.5	1	1					106	1040.5
300 to 350								5	2	9	2								18	140.0
350 to 400																				.3
Totals						1	3	18	33	51	14	5	1	1					127	1409.6

Gross Weight: 230,000 to 260,000	Incremental Load Factor Δn_s (g)																Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
200 to 250								1	1	4	1								7	42.4
250 to 300								5	12	11	4	1	1						34	370.9
300 to 350						1		1	5	2	1								10	41.4
Totals						1		7	18	17	6	1	1						51	454.7

Gross Weight: 260,000 to 290,000	Incremental Load Factor Δn_s (g)																Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
250 to 300									2										2	15.2
Totals									2										2	15.2

TABLE 7
Castle AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 30,000 to 40,000 feet

Gross Weight: 110,000 to 140,000 — Incremental Load Factor Δn_z (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_z (g)	Flt. Time (Min.)
150 to 200									6	2									8	174.9
200 to 250					1			1	4	3	15	4			1				29	1102.7
250 to 300								3	1	3	2	1							10	420.6
Totals					1			1	7	10	20	6	1		1				47	1698.2

Gross Weight 140,000 to 170,000 — Incremental Load Factor Δn_z (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_z (g)	Flt. Time (Min.)
100 to 150																				1.6
150 to 200								1				1							2	92.8
200 to 250					1		7	54	153	181	37	4							437	3363.4
250 to 300					1		1	22	46	63	24	2	1						160	1646.1
300 to 350																				17.0
350 to 400																				.7
Totals					1	1	8	77	199	244	61	7	1						599	5071.6

Gross Weight 170,000 to 200,000 — Incremental Load Factor Δn_z (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	4	.5	.6	.7	.8	.9	Total No Δn_z (g)	Flt. Time (Min.)
150 to 200																				8.3
200 to 250								6	63	92	115	37	3	1					317	2389.1
250 to 300						1	1	17	29	46	24	7		1					126	1842.6
300 to 350																				12.8
Totals						1	7	80	121	161	61	10	1	1					443	4252.8

Gross Weight 200,000 to 230,000 — Incremental Load Factor Δn_z (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_z (g)	Flt. Time (Min.)
200 to 250							1	12	14	32	1								60	1105.0
250 to 300							1	37	64	104	25		1						232	2370.0
300 to 350																				15.0
Totals							2	49	78	136	26		1						292	3490.0

Gross Weight 230,000 t — Incremental Load Factor Δn_z (g)

Airspeed (K)	-.9	-.8	-..	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_z (g)	Flt. Time (Min.)
200 to 250							2	7	1		1							11	61.1
250 to 300						1	14	15	34	7								71	632.1
300 to 350																				.2
Totals						1	16	22	35	7	1							82	693.4

Gross Weight: 260,000 to 290,000 — Incremental Load Factor Δn_z (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_z (g)	Flt. Time (Min.)
200 to 250								2		5									7	21.4
250 to 300									1										1	91.3
Totals								2	1	5									8	112.7

TABLE 8
Castle AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 40,000 to 50,000 feet

Gross Weight: 110,000 to 140,000	Incremental Load Factor Δn_e (g)																	Total No. Δn_e (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
150 to 200																			.9
200 to 250																			5.3
Totals																			5.8

Gross Weight 140,000 to 170,000	Incremental Load Factor Δn_e (g)																	Total No. Δn_e (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
150 to 200											1								1	47.2
200 to 250								9	27	33	17			1					87	738.9
250 to 300																				1.2
Totals								9	27	33	18			1					88	787.3

Gross Weight 170,000 to 200,000	Incremental Load Factor Δn_z (g)																	Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	4	.5	.6	.7	.8	.9	
150 to 200																				28.0
200 to 250								4	4	8									16	497.5
250 to 300																				2.2
Totals								4	4	8									16	527.7

Gross Weight 200,000 to 230,000	Incremental Load Factor Δn_z (g)																	Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
200 to 250										2									2	187.0
Totals										2									2	187.0

TABLE 9
Walker AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range. 0 to 1,000 feet

Gross Weight 140,000 to 170,000	Incremental Load Factor Δn_e (g)																	Total No. Δn_e (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
100 to 150									2	2									4	8.0
150 to 200																				.4
Totals									2	2									4	8.4

Gross Weight 170,000 to 200,000	Incremental Load Factor Δn_e (g)																	Total No. Δn_e (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
100 to 150									2	1									3	1.6
150 to 200								1			2								3	.7
Totals								1	2	1	2								6	2.3

Gross Weight 200,000 to 230,000	Incremental Load Factor Δn_e (g)																	Total No. Δn_e (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
150 to 200																				.1
Totals																				.1

TABLE 10
Walker AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range 1,000 to 2,500 feet

Gross Weight 140,000 to 170,000	Incremental Load Factor Δn_z (g)																	Total No Δn_z (g)	Flt Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
100 to 150								4	4	10	7	1							26	27.3
150 to 200								33	15	22	34	3							107	27.6
200 to 250								1			1								2	.2
250 to 300								2		1		1							4	.6
Totals								40	19	33	42	5							139	55.7

Gross Weight 170,000 to 200,000	Incremental Load Factor Δn_z (g)																	Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
100 to 150								2	9	4	3	2							20	9.2
150 to 200							2	46	48	68	57	6	1						228	47.2
200 to 250										1									1	.7
250 to 300																				4.2
Totals							2	48	57	73	60	8	1						249	57.3

Gross Weight: 200,000 to 230,000	Incremental Load Factor Δn_z (g)																	Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
150 to 200																				.4
200 to 250																				.6
Totals																				1.0

TABLE 11
Walker AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 2,500 to 5,000 feet

Gross Weight: 110,000 to 140,000

Airspeed (K)	Incremental Load Factor Δn_s (g)															Total No. Δn_s (g)	Flt. Time (Min.)
	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
100 to 150							4	37	110	161	43		1						356	253.8
150 to 200							2	37	40	100	41	2							222	77.4
200 to 250							1	3	1	4	1								10	1.8
250 to 300										1									1	.2
Totals							7	77	151	266	85	2	1						589	333.2

Gross Weight: 140,000 to 170,000

Airspeed (K)	Incremental Load Factor Δn_s (g)															Total No. Δn_s (g)	Flt. Time (Min.)
	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
100 to 150							9	109	192	235	118	9	2	1					675	318.1
150 to 200						1	11	190	189	302	265	18	5						981	328.7
200 to 250							8	19	18	20	19	2							86	12.2
250 to 300						1	2	5	4	3	9	2							26	6.5
300 to 350										1	3								4	.5
Totals						2	30	323	403	561	414	31	7	1					1772	666.0

Gross Weight: 170,000 to 200,000

Airspeed (K)	Incremental Load Factor Δn_s (g)															Total No. Δn_s (g)	Flt. Time (Min.)
	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
100 to 150							2	29	16	34	13	3							97	72.5
150 to 200							5	112	126	170	120	11	1						545	221.5
200 to 250							4	15	12	18	17	2							68	11.4
250 to 300					1		4	21	8	14	20	3	1						72	9.1
Totals					1		15	177	162	236	170	19	2						782	310.5

Gross Weight: 200,000 to 230,000

Airspeed (K)	Incremental Load Factor Δn_s (g)															Total No. Δn_s (g)	Flt. Time (Min.)
	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
100 to 150								1	1										2	1.8
150 to 200					1		5	24	25	33	9	2							99	72.8
200 to 250							7	36	44	51	31	4							173	50.3
250 to 300							6	41	45	67	58	18	2	1					238	38.0
Totals					1		18	102	115	151	98	24	2	1					512	162.9

Gross Weight: 230,000 to 260,000

Airspeed (K)	Incremental Load Factor Δn_s (g)															Total No. Δn_s (g)	Flt. Time (Min.)
	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
100 to 150																				.8
150 to 200								1	11	4	5								21	6.0
200 to 250							1	1	3	2	7								14	2.0
250 to 300								2	5	4	5								16	2.0
Totals							1	4	19	10	17								51	10.8

TABLE 12
Walker AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range, 5,000 to 10,000 feet

Gross Weight 110,000 to 140,000	Incremental Load Factor Δn_s (g)																	Total No. Δn_s (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
100 to 150							5	38	53	52	12								160	229.8
150 to 200							6	63	73	106	44	6	1						299	215.2
200 to 250							5	22	35	50	30	8	3	2					155	51.8
250 to 300				1	1	3	5	21	7	15	24	8	3	1					89	8.1
300 to 350																				.1
Totals				1	1	3	21	144	168	223	110	22	7	3					703	505.0

Gross Weight 140,000 to 170,000	Incremental Load Factor Δn_s (g)																	Total No. Δn_s (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	4	.5	.6	.7	.8	.9	
100 to 150						3	10	122	135	138	58	4							470	179.4
150 to 200					1	3	30	287	301	434	229	26	2						1313	508.6
200 to 250						5	20	122	132	188	128	34	6	1	1				637	126.5
250 to 300					1	4	15	50	48	85	79	30	8	2	1				323	60.8
300 to 350							5	12	4	15	5	1							42	4.7
Totals					2	15	80	593	620	860	499	95	16	3	2				2785	880.0

Gross Weight 170,000 to 200,000	Incremental Load Factor Δn_s (g)																	Total No. Δn_s (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
100 to 150			1				1	7	10	9	4								32	33.1
150 to 200						1	6	61	80	120	68	3							339	233.0
200 to 250							1	29	43	51	35	5	3						167	63.3
250 to 300						1	7	81	95	114	85	15	1						399	126.2
300 to 350									1	1	3	1							6	6.4
Totals			1			2	15	176	229	295	195	24	4						943	462.0

Gross Weight: 200,000 to 230,000	Incremental Load Factor Δn_s (g)																	Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
150 to 200							1	1		4									6	37.4
200 to 250							4	9	7	18	17	1	1						57	17.8
250 to 300					2		27	146	190	222	137	37	2	1	1				765	316.9
300 to 350						1		7	15	5	14	5	2						49	8.9
Totals					2	1	32	163	212	249	168	43	5	1	1				877	381.0

Gross Weight: 230,000 to 260,000	Incremental Load Factor Δn_z (g)																	Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	.9	.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
150 to 200																				.1
200 to 250									5	1									6	1.1
250 to 300								2	13	8	5								28	14.3
Totals								2	18	9	5								34	15.5

TABLE 13
Walker AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 10,000 to 20,000 feet

Gross Weight 110,000 to 140,000

Airspeed (K)	Incremental Load Factor Δn_s (g)																Total No Δn_z (g)	Flt Time (Min.)
	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
100 to 150											1								1	8.9
150 to 200									1	2				1					4	42.3
200 to 250				1			2	12	16	15	15	5	2						68	167.3
250 to 300						2	4	8	5	18	7		2						46	61.3
Totals				1	2	6	20	22	35	23	5	4	1						119	279.8

Gross Weight 140,000 to 170,000

Airspeed (K)	Incremental Load Factor Δn_s (g)																Total No Δn_z (g)	Flt Time (Min.)
	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
100 to 150								2	1	1									4	1.9
150 to 200							1	13	14	21	19	2							70	33.6
200 to 250			1	2			7	28	34	46	31	9	2	1					161	427.4
250 to 300				1	7	22	64	60	103	52	18	4				1			332	337.5
300 to 350					2	6	9	8	12	6	1	1							45	14.0
350 to 400								3	1	3									7	.8
Totals			1	3	9	28	81	114	165	130	69	16	2	1		1			619	844.2

Gross Weight 170,000 to 200,000

Airspeed (K)	Incremental Load Factor Δn_s (g)																Total No Δn_z (g)	Flt. Time (Min.)
	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
150 to 200								2											2	1.3
200 to 250							2	21	26	34	5								88	671.5
250 to 300							3	28	49	66	19	3							168	608.5
300 to 350							1	4	4	8									17	14.6
Totals							6	55	79	108	24	3							275	1300.9

Gross Weight: 200,000 to 230,000

Airspeed (K)	Incremental Load Factor Δn_s (g)																Total No. Δn_z (g)	Flt. Time (Min.)
	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
150 to 200																				1.4
200 to 250						2	1	2	3	11		1							20	247.6
250 to 300						1	13	77	173	210	60	9	3	2					548	1152.6
300 to 350								1	3	11	4								19	39.7
350 to 400																				2.1
Totals						3	14	80	179	232	64	10	3	2					587	1493.4

Gross Weight: 230,000 to 260,000

Airspeed (K)	Incremental Load Factor Δn_s (g)																Total No. Δn_z (g)	Flt. Time (Min.)
	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
250 to 300						1	3	14	18	21	7	1							65	41.0
Totals						1	3	14	18	21	7	1							65	41.0

TABLE 14
Walker AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range 20,000 to 30,000 feet

Gross Weight 110,000 to 140,000	Incremental Load Factor Δn_z (g)																	Total No Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
100 to 150																			15.9
150 to 200										1								1	40.3
200 to 250						1	1	3	8	3	2			1				19	256.2
250 to 300							3	8	16	20	14	4	1	1				65	145.7
300 to 350																			17.8
Totals						1	4	11	24	24	16	4	1	2				85	475.9

Gross Weight 140,000 to 170,000	Incremental Load Factor Δn_z (g)																	Total No Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
100 to 150																			2.7
150 to 200						1	1	3		3	1							9	73.9
200 to 250							5	28	44	35	13	5	3	1				114	1071.8
250 to 300							11	35	46	43	28	6	6					175	1138.7
300 to 350								1	1	8	2							12	38.3
Totals						1	17	67	69	89	44	11	9	1				308	2325.4

Gross Weight 170,000 to 200,000	Incremental Load Factor Δn_z (g)																	Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
100 to 150																			.5
150 to 200																			31.0
200 to 250					3	1	9	52	64	113	19	9	1					271	1552.3
250 to 300		1	1	1	4	7	49	79	129	56	10	3	4					344	1921.3
300 to 350								1		4								5	33.9
Totals		1	1	4	5	16	102	145	246	73	19	4	4					620	3539.0

Gross Weight 200,000 to 230,000	Incremental Load Factor Δn_z (g)																	Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
150 to 200										1								1	6.8
200 to 250						1	1	35	68	114	29	4	1	1				254	865.9
250 to 300					1	2	19	125	150	256	93	12	2					660	1920.5
300 to 350							6	57	63	91	50	13	5					285	63.1
Totals					1	3	26	217	281	462	172	29	8	1				1200	2856.3

Gross Weight: 230,000 to 260,000	Incremental Load Factor Δn_z (g)																	Total No. Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	
200 to 250																			35.7
250 to 300									4									4	59.2
Totals									4									4	94.9

TABLE 15
Walker AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 30,000 to 40,000 feet

Gross Weight 110,000 to 140,000 — Incremental Load Factor Δn_e (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_e (g)	Flt. Time (Min.)
100 to 150																				.3
150 to 200									2										2	19.7
200 to 250							2	4	47	60	60	25	2						200	660.5
250 to 300									8	23	32	13							76	153.6
300 to 350																				1.0
Totals							2	4	55	85	92	38	2						278	835.1

Gross Weight 140,000 to 170,000 — Incremental Load Factor Δn_e (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_e (g)	Flt. Time (Min.)
150 to 200								1	1										2	55.5
200 to 250							2	16	142	185	232	88	17		1				683	5089.7
250 to 300							1	3	27	63	74	23	4						195	515.6
300 to 350									1	1	1	2							5	9.3
Totals							3	19	171	250	307	113	21		1				885	5666.1

Gross Weight: 170,000 to 200,000 — Incremental Load Factor Δn_e (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_e (g)	Flt. Time (Min.)
100 to 150																				21.4
150 to 200																				38.6
200 to 250							8	66	171	189	55	4	1	2					496	5024.4
250 to 300							3	15	105	100	30								253	1188.1
300 to 350																				7.7
Totals							11	81	276	289	85	4	1	2					749	6280.2

Gross Weight: 200,000 to 230,000 — Incremental Load Factor Δn_e (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_e (g)	Flt. Time (Min.)
150 to 200																				3.6
200 to 250							2	37	90	129	48	2							308	2472.5
250 to 300							3	28	58	101	25								215	1760.9
300 to 350																				1.9
Totals							5	65	148	230	73	2							523	4238.9

Gross Weight: 230,000 to 260,000 — Incremental Load Factor Δn_e (g)

Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9	Total No. Δn_e (g)	Flt. Time (Min.)
200 to 250										2	1								3	12.5
250 to 300									8	2									10	13.0
Totals									8	4	1								13	25.5

TABLE 16
Walker AFB

Distribution of Incremental Gust Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range 40,000 to 50,000 feet

Gross Weight 110,000 to 140,000	Incremental Load Factor Δn_z (g)																	Total No.	Total Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
150 to 200								1	1										2	16.8
200 to 250									5		9	4							18	140.9
250 to 300																				20.3
Totals								1	6		9	4							20	178.0

Gross Weight 140,000 to 170,000	Incremental Load Factor Δn_z (g)																	Total No.	Total Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
150 to 200							3	12	40	36	4								95	190.2
200 to 250								7	20	37	3			1					68	1007.4
250 to 300																				13.9
Totals							3	19	60	73	7			1					163	1211.5

Gross Weight 170,000 to 200,000	Incremental Load Factor Δn_z (g)																	Total No.	Total Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
150 to 200																				3.1
200 to 250								3	12	18	2								35	995.4
250 to 300																				3.3
Totals								3	12	18	2								35	1001.8

Gross Weight. 200,000 to 230,000	Incremental Load Factor Δn_z (g)																	Total No.	Total Δn_z (g)	Flt. Time (Min.)
Airspeed (K)	-.9	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.1	.1	.2	.3	.4	.5	.6	.7	.8	.9		
200 to 250									1	1									2	124.8
250 to 300																				.6
Totals									1	1									2	125.4

TABLE 17
Castle AFB

Distribution of Primary Maneuver Load Factors by Equivalent Airspeed by Gross Weight within Altitude Range: 0 to 1,000 feet

Gross Weight: 110,000 to 140,000	Load Factor n_z (g)																						Total No. n_z	Flt. Time
Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	(g)	(Min.)
100 to 150											2		2											4	18.3
150 to 200										3	1		5	5	2									16	13.2
200 to 250																									.1
Totals										3	3		7	5	2									20	31.6

Gross Weight: 140,000 to 170,000	Load Factor n_z (g)																						Total No. n_z	Flt. Time
Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	(g)	(Min.)
100 to 150									5	14	35		88	41	4	1								188	440.3
150 to 200									5	52	52		139	171	19	1								439	354.4
200 to 250						1		1	2	2	5		6	7										24	10.5
250 to 300										1	3			1	1									6	1.3
300 to 350																									.1
Totals						1		1	12	69	95		233	220	24	2								657	806.6

Gross Weight 170,000 to 200,000	Load Factor n_z (g)																						Total No. n_z	Flt. Time
Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	(g)	(Min.)
100 to 150									3	34	34		79	40	6									196	873.7
150 to 200								1	10	112	417		399	457	74	3								1473	969.7
200 to 250									1	4	13		4	14	4									40	20.1
250 to 300										1			1	1	1									4	.3
Totals								1	14	151	464		483	512	85	3								1513	1863.8

Gross Weight 200,000 to 230,000	Load Factor n_z (g)																						Total No. n_z	Flt. Time
Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	6	.7	8	.9	1.0	1.1	1.2	1.3	1.4	[illegible]			1.8	1.9	2.0	2.1	(g)	(Min.)
100 to 150																									6.6
150 to 200									9	19	14		22	4	2									70	35.7
200 to 250									1	2	4		7	1	1									16	11.3
250 to 300										1	1		4		1									7	2.3
300 to 350																									.1
Totals									10	22	19		33	5	4									93	56.0

Gross Weight 230,000 to 260,000	Load Factor n_z (g)																						Total No. n_z	Flt. Time
Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	(g)	(Min.)
100 to 150																									2.2
150 to 200									2	7	8		3	6										26	8.7
200 to 250									1	4	7		3	4										19	7.9
250 to 300									1				3	1	1									6	1.4
300 to 350															2									2	.4
Totals									4	11	15		9	11	3									53	20.6

Gross Weight: 260,000 to 290,000	Load Factor n_z (g)																						Total No. n_z	Flt. Time
Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	(g)	(Min.)
100 to 150																									.3
150 to 200																									.6
Totals																									.9

TABLE 18
Castle AFB

Distribution of Primary Maneuver Load Factors by Equivalent Airspeed by Gross Weight within Altitude Range: 1,000 to 12,500 feet

Gross Weight: 110,000 to 140,000 — Load Factor n_z (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
100 to 150										1	2		3	1										7	29.8
150 to 200									1	8	9		16	10	1	1	1							47	19.7
200 to 250									1	1	2		5	9	5	3	1							27	6.2
250 to 300													1	2	1									4	.7
Totals									2	10	13		25	22	7	4	2							85	50.4

Gross Weight: 140,000 to 170,000 — Load Factor n_z (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
100 to 150									8	64	69		106	65	5									317	216.3
150 to 200					1				9	141	163		437	562	106	8								1427	670.9
200 to 250								2	6	25	10		24	23	10	2								102	33.6
250 to 300								3	4	12	9		12	24	21	5	1	2						93	20.1
300 to 350								1	1	2	1		3	4	7		2	1						17	4.3
Totals					1			6	28	244	252		582	678	144	15	3	3						1956	945.2

Gross Weight: 170,000 to 200,000 — Load Factor n_z (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
100 to 150									5	50	96		64	29	3									247	275.7
150 to 200								2	17	314	569		1236	1415	205	10								3768	2126.2
200 to 250							1		2	31	35		33	74	30	3	2							217	99.4
250 to 300							2	1	2	15	6		5	30	9	6								76	40.3
300 to 350										2	1		1	3	2									9	2.2
Totals							3	3	26	412	707		1339	1551	259	19	2							4317	2563.8

Gross Weight: 200,000 to 230,000 — Load Factor n_z (g)

Airspeed (K)	.1	0	.1	2	.3	.4	.5	.6	.7	8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
100 to 150									1					1										2	2.6
150 to 200										5	4		21	7										37	24.1
200 to 250									1	11	19		7	7										45	16.2
250 to 300										9	20		16	13	10	1								69	28.8
300 to 350										5	2		8	6	3	1								25	6.5
Totals									2	30	45		52	34	13	2								178	78.2

Gross Weight: 230,000 to 260,000 — Load Factor n_z (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
150 to 200										2														2	.8
200 to 250								1	1	3	6		4	1										16	5.4
250 to 300										8	8		8	7	1									32	13.5
300 to 350									1	1	2			3	3									10	3.1
Totals								1	2	14	16		12	11	4									60	22.8

Gross Weight: 260,000 to 290,000 — Load Factor n_z (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
250 to 300											3													3	.8
Totals											3													3	.8

TABLE 19
Castle AFB

Distribution of Primary Maneuver Load Factors by Equivalent Airspeed by Gross Weight within Altitude Range: 2,500 to 5,000 feet

Gross Weight: 110,000 to 140,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
100 to 150													1											1	.9
150 to 200																									3.4
200 to 250										3	3		3	3										12	5.8
250 to 300										1	2			2										5	3.3
Totals										4	5		4	5										18	13.4

Gross Weight: 140,000 to 170,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
100 to 150														1										1	.6
150 to 200									1	8	18		17	16	2	1								63	50.1
200 to 250									2	9	4		10	6	3	1								35	20.1
250 to 300								1	5	22	15		18	32	10	3	2	2						110	48.7
300 to 350								1	3	9	4		8	11	6	3		1	1					47	12.9
350 to 400								1			1			1			1							4	1.7
Totals								3	11	48	42		53	67	21	8	3	3	1					260	134.1

Gross Weight: 170,000 to 200,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
100 to 150										4	4			2										10	19.1
150 to 200									6	48	128		183	175	11									551	426.5
200 to 250									2	16	20		32	35	12	1								118	69.0
250 to 300								1	3	17	18		36	40	10	7	3							135	60.3
300 to 350									2	4	3		3	10	3	5	1	1						32	8.9
350 to 400														2										2	.6
Totals								1	13	89	173		254	264	36	13	4	1						848	584.4

Gross Weight: 200,000 to 230,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
150 to 200										1	1		22	7										31	29.8
200 to 250																									2.3
250 to 300					1			1	1	12	17		18	29	5	1								85	45.8
300 to 350									3	4	4		11	7	3	2							1	35	20.8
Totals					1			1	4	17	22		51	43	8	3							1	151	98.7

Gross Weight: 230,000 to 260,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
200 to 250																									.4
250 to 300									3	3	9		9	8	2									34	21.5
300 to 350									1	1	4		3	3										12	6.3
Totals									4	4	13		12	11	2									46	28.2

Gross Weight: 260,000 to 290,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
250 to 300																									1.3
Totals																									1.3

TABLE 20
Castle AFB

Distribution of Primary Manauver Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 5,000 to 10,000 feet

Gross Weight 110,000 to 140,000

Airspeed (K)	Load Factor n_s (g) -.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
100 to 150																									.1
150 to 200														2										2	2.4
200 to 250										3	4		4	12	1									24	11.1
250 to 300													2	9										11	3.8
300 to 350																									2.2
Totals										3	4		6	23	1									37	19.6

Gross Weight 140,000 to 170,000

Airspeed (K)	Load Factor n_s (g) -.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
200 to 250										1	1													2	1.0
250 to 300									4	27	15		33	21	13	1	1							115	73.2
300 to 350									2	10	7		6	11	12	1	2		1					52	24.9
350 to 400																									.1
Totals									6	38	23		39	32	25	2	3		1					169	105.2

Gross Weight 170,000 to 200,000

Airspeed (K)	Load Factor n_s (g) -.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
100 to 150																									.3
150 to 200										2	2		10											14	24.0
200 to 250										4	5		14	12	3									38	51.3
250 to 300									1	2	35	40		50	51	18	4							201	130.8
300 to 350											2	3		3	8	5		1						22	8.7
Totals									1	2	43	50		77	71	26	4	1						275	215.1

Gross Weight 200,000 to 230,000

Airspeed (K)	Load Factor n_s (g) -.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	No. n_s (g)	Flt. Time (Min.)
200 to 250						1																		1	5.0
250 to 300						1			2	9	29		14	27	5	1								88	117.3
300 to 350									1	4	7		12	15										39	38.6
Totals						2			3	13	36		26	42	5	1								128	160.9

Gross Weight 230,000 to 260,000

Airspeed (K)	Load Factor n_s (g) -.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	No. n_s (g)	Flt. Time (Min.)
200 to 250											1													1	2.3
250 to 300										5	8		10	8	1									32	43.5
300 to 350										1	1		4	6	1									13	14.1
Totals										6	10		14	14	2									46	59.9

Gross Weight: 260,000 to 290,000

Airspeed (K)	Load Factor n_s (g) .1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
250 to 300											2													2	3.1
Totals											2													2	3.1

TABLE 21
Castle AFB

Distribution of Primary Maneuver Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 10,000 to 20,000 feet

Gross Weight: 110,000 to 140,000 — Load Factor n_z (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
100 to 150										1			1											2	3.6
150 to 200									2	5	6		16	6	6									41	20.3
200 to 250					1			1	2	19	31		60	29	12	3				1				139	133.7
250 to 300									1	2	2		3	3		1								14	4.3
300 to 350													1	1										2	0.6
Totals					1			1	3	27	39		81	41	18	4				1				216	166.5

Gross Weight: 140,000 to 170,000 — Load Factor n_z (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
100 to 150										1	1		3	4										9	4.0
150 to 200									1		6		3	6	1									21	7.1
200 to 250									2	23	19		57	29	9	3	1							143	131.3
250 to 300								1	5	39	43		39	49	13	3								192	187.4
300 to 350								2	1	12	9		16	18	6	1	1							66	60.4
Totals								3	9	75	80		120	106	29	7	2							431	390.4

Gross Weight: 170,000 to 200,000 — Load Factor n_z (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
100 to 150																									.1
150 to 200									1	1	23		6	13	2									46	43.8
200 to 250								2	13	56	90		104	79	26	2	2	2						376	357.1
250 to 300						1		2	8	47	94		99	117	37	13	7	2		1				428	385.0
300 to 350										7	1		11	9	2	2				1				33	21.6
350 to 400																									.8
Totals						1		4	22	111	408		220	218	67	17	9	4		2				883	808.2

Gross Weight: 200,000 to 230,000 — Load Factor n_z (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
150 to 200										1	2			1										4	7.9
200 to 250										12	21		11	17	4	2	3							70	82.5
250 to 300									3	26	33		72	61	12	8	1		1					237	323.3
300 to 330										6	13		16	20	3									58	92.6
Totals									3	45	69		99	99	19	10	4		1					369	506.3

Gross Weight: 230,000 to 260,000 — Load Factor n_z (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
200 to 250											1			1										2	4.5
250 to 300									1	2	18		14	8										43	103.9
300 to 330										7	4		9	7	1		1							29	28.0
Totals									1	9	23		23	16	1		1							74	136.4

Gross Weight: 260,000 to 290,000 — Load Factor n_z (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
250 to 300																									7.1
Totals																									7.1

TABLE 22
Castle AFB

Distribution of Primary Maneuver Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range 20,000 to 30,000 feet

Gross Weight 110,000 to 140,000

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
100 to 150																									.1
150 to 200							1	1	5	17	11		22	18	11	1								87	66.6
200 to 250							1	4	5	31	31		68	51	14	7	3	3						198	134.8
250 to 300									3	22	17		45	35	12	3	3	1						141	90.1
300 to 350									2	7	5		6	8	1									29	22.0
Totals							2	5	15	77	64		121	112	38	11	6	4						455	291.6

Gross Weight 140,000 to 170,000

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
150 to 200										8	6		9	7	2	1								33	21.9
200 to 250					1			3	16	106	144		235	158	81	9	6	2	2					763	502.2
250 to 300						1	1	11	146	251			442	260	76	16	9	3	1	1		1		1217	1317.6
300 to 350									8	16			43	36	7	4	1	1						116	103.4
Totals					1	1	1	14	27	268	417		729	461	166	30	16	6	3	1		1		2109	2324.7

Gross Weight 170,000 to 200,000

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
150 to 200								1	1	3	1		1		1									8	6.6
200 to 250								6	18	110	149		425	220	78	22	6	2						832	568.5
250 to 300									17	117	417		366	277	95	21	8	1						1119	1366.6
300 to 350								1		16	15		28	35	3	5	1							104	91.5
Totals								8	36	246	578		820	532	177	48	15	3						2063	2133.6

Gross Weight 200,000 to 230,000

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
150 to 200																									.6
200 to 250									1	10	39		37	28	12	2	1							126	223.4
250 to 300									5	98	173		164	193	65	20	2							679	1040.5
300 to 350								1	1	26	33		47	34	9	5	2							158	145.0
350 to 400									1							1								2	.3
Totals								1	8	94	245		247	255	86	28	5							965	1409.8

Gross Weight: 230,000 to 260,000

Airspeed (K)	.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
200 to 250										6	7		14	7	3	1								38	42.4
250 to 300									1	27	34		49	16	4									131	370.9
300 to 350								1	1	3	10		15	6	2									38	41.4
Totals								1	2	36	51		78	29	9	1								207	454.7

Gross Weight: 260,000 to 290,000

Airspeed (K)	.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_z (g)	Flt. Time (Min.)
250 to 300											1													1	15.2
Totals											1													1	15.2

TABLE 23
Castle AFB

Distribution of Primary Maneuver Load Factors by Equivalent Airspeed by Gross Weight within Altitude Range: 30,000 to 40,000 feet

Gross Weight: 110,000 to 140,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
150 to 200					1		1	4	5	29	47		42	46	22	6	2							195	176.9
200 to 250						1	3	3	22	112	171		286	176	73	24	6	1	1	2				881	1102.7
250 to 300						1		4	15	34	52		119	70	20	9	6	2						362	420.6
Totals					1	2	4	9	42	175	270		447	292	115	39	14	3	1	4				1438	1699.2

Gross Weight: 140,000 to 170,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
100 to 150										1			3	2										6	1.0
150 to 200								3	1	8	12		16	10	2	1								53	42.8
200 to 250							3	10	62	296	557		627	517	197	51	10	6	2	2				2340	3363.4
250 to 300				1		2	1	7	24	156	271		382	300	113	42	13	2	1	1				1316	1846.1
300 to 350							1		1	1	2		6	6	4			1			1			23	17.0
350 to 400																									.7
Totals				1		2	5	20	88	484	842		1036	835	316	94	23	9	3	3	1			3740	5071.0

Gross Weight: 170,000 to 200,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
150 to 200										9	6		17	13	1		1							47	8.3
200 to 250								5	24	153	470		376	234	94	46	4	4						1180	2369.1
250 to 300	1							2	7	97	184		275	192	67	20	6	1	1	1				854	1862.6
300 to 350										3	3		4	3	3		1	1						18	12.8
Totals	1							7	31	262	663		672	442	167	66	10	6	1	1				2079	4252.8

Gross Weight: 200,000 to 230,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
200 to 250								1	6	90	165		176	125	28	4	5							600	1109.0
250 to 300						1	1	3	15	119	191		300	179	47	10	4		1					871	2370.0
300 to 350						1				4	4		4	2	1				1					17	15.0
Totals						2	1	4	21	213	360		480	306	76	14	9		2					1488	3494.0

Gross Weight: 230,000 to 260,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
200 to 250										5	10		6	7	2									30	61.1
250 to 300									1	25	46		46	44	6									168	632.1
300 to 350													1	2										3	.2
Totals									1	30	56		53	53	8									201	693.4

Gross Weight: 260,000 to 290,000 — Load Factor n_s (g)

Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	Total No. n_s (g)	Flt. Time (Min.)
200 to 250													1											1	21.4
250 to 300											1		4											5	91.3
Totals											1		5											6	112.7

TABLE 24
Castle AFB

Distribution of Primary Maneuver Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 40,000 to 50,000 feet

Gross Weight: 110,000 to 140,000 — Load Factor n_s (g)																									Total No. n_s (g)	Flt. Time (Min.)
Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1		
150 to 200																										.9
200 to 250																										5.3
Totals																										5.8

Gross Weight: 140,000 to 170,000 — Load Factor n_s (g)																									Total No. n_s (g)	Flt. Time (Min.)
Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1		
150 to 200										2	6		6	2											16	67.2
200 to 250								1	7	19	65		53	49	14	1	2								211	738.9
250 to 300											1				1										2	1.2
Totals								1	7	21	70		57	51	15	1	2								225	787.3

Gross Weight: 170,000 to 200,000 — Load Factor n_s (g)																									Total No. n_s (g)	Flt. Time (Min.)
Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1		
150 to 200											1		3												4	28.0
200 to 250								1	1	17	11		36	12	2	1									81	497.5
250 to 300																										2.2
Totals								1	1	17	12		39	12	2	1									85	527.7

Gross Weight: 230,000 to 230,000 — Load Factor n_z (g)																									Total No. n_s (g)	Flt. Time (Min.)
Airspeed (K)	-.1	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1		
200 to 250										3	3		15	3											24	187.0
Totals										3	3		15	3											24	187.0

TABLE 25
Walker AFB

Distribution of Primary Maneuver Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 0 to 1,000 feet

Gross Weight: 140,000 to 170,000	Load Factor n_z (g)																				Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
100 to 150							1	2			1	1	1								6	8.0
150 to 200									1			3									4	.4
Totals							1	2	1		1	4	1								10	8.4

Gross Weight: 170,000 to 200,000	Load Factor n_z (g)																				Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
100 to 150											1	1									2	1.0
150 to 200											1										1	.7
Totals											2	1									3	2.3

Gross Weight: 200,000 to 230,000	Load Factor n_z (g)																				Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
150 to 200									1												1	.1
Totals									1												1	.1

TABLE 26
Walker AFB

Distribution of Primary Maneuver Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 1,000 to 2,500 feet

Gross Weight: 140,000 to 170,000	Load Factor n_z (g)																				Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
100 to 150								2	1		8	9	2								22	27.3
150 to 200								9	8		12	17	13	2							61	27.6
200 to 250																						.2
250 to 300											1	1									2	.6
Totals								11	9		21	27	15	2							85	55.7

Gross Weight: 170,000 to 200,000	Load Factor n_z (g)																				Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
100 to 150									1		3	3									7	5.2
150 to 200							1	15	13		35	55	16								135	47.2
200 to 250									1			1	1								3	.7
250 to 300												1		1							2	4.2
Totals							1	15	15		38	60	17	1							147	57.3

Gross Weight: 200,000 to 230,000	Load Factor n_z (g)																				Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
150 to 200									1			1									2	.4
200 to 250									1			1									2	.6
Totals									2			2									4	1.0

TABLE 27
Walker AFB

Distribution of Primary Maneuver Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 2,500 to 5,000 feet

Gross Weight 110,000 to 140,000	Load Factor n_z (g)																				Total No. n_z (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0		
100 to 150						1	6	51	91		117	103	23	1							393	253.8
150 to 200							5	23	20		60	79	17	1							205	77.6
200 to 250								1			1	2	1								5	1.8
250 to 300								2					1								3	.4
Totals						1	11	77	111		178	184	42	2							606	333.4

Gross Weight 140,000 to 170,000	Load Factor n_z (g)																				Total No. n_z (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0		
100 to 150						2	11	91	103		194	127	25	2	1						556	318.1
150 to 200						1	9	91	91		171	305	78	11		1					758	328.7
200 to 250							1	2	6		9	14	7	1							38	12.2
250 to 300							1		2		6	7	8	1	1						26	6.5
300 to 350												1									1	.5
Totals						3	22	184	200		380	454	118	15	2	1					1379	666.0

Gross Weight 170,000 to 200,000	Load Factor n_z (g)																				Total No. n_z (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0		
100 to 150							2	28	39		72	50	12								203	72.5
150 to 200						2	9	61	87		156	215	66	4	1						561	221.5
200 to 250						2	3	6	3		7	8	5	3							37	11.4
250 to 300							1	4	2		4	13	6	4	4						38	5.1
Totals						4	15	99	91		239	286	89	11	5						839	310.5

Gross Weight: 200,000 to 230,000	Load Factor n_z (g)																				Total No. n_z (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0		
100 to 150							1		1		2	3									7	1.8
150 to 200						2	27	74	36		68	65	3								275	72.8
200 to 250							2	33	34		36	27	2	1							135	50.2
250 to 300							3	18	15		28	52	27	5	1						149	38.0
Totals						2	33	125	86		134	147	32	6	1						566	162.9

Gross Weight: 230,000 to 260,000	Load Factor n_z (g)																				Total No. n_z (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0		
100 to 150																						.8
150 to 200						1	2	5			1	5	1								15	6.0
200 to 250									7		3	4									14	2.0
250 to 300								1	1		4	1									7	2.0
Totals						1	2	6	8		8	10	1								36	10.8

TABLE 28
Walker AFB

Distribution of Primary Maneuver Load Factors by Equivalent Airspeed by Gross Weight within Altitude Range. 5,000 to 10,000 feet

Gross Weight: 110,000 to 140,000	Load Factor n_s (g)																			Total No. n_s	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
100 to 150							10	95	126		136	95	17	2							481	229.8
150 to 200						1		14	86	77		161	108	30	3						480	215.2
200 to 250								1	12	10		37	35	16	5	3	1				120	51.8
250 to 300								3	1	1		3	5	3	3		1				20	8.1
300 to 350																						.1
Totals						1		28	194	214		337	243	66	13	3	2				1101	505.0

Gross Weight 140,000 to 170,000	Load Factor n_s (g)																			Total No. n_s	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
100 to 150							10	97	76		111	59	9	1							363	179.4
150 to 200				1	1	2	16	147	169		243	316	82	5	1						983	508.6
200 to 250						3	8	31	32		56	74	35	9	4	2	1				255	126.5
250 to 300					1	2	9	18	16		24	49	32	8	6	3					168	60.6
300 to 350					1	1	2	2	3		4	1	4	2		2	1				23	4.7
Totals				1	3	8	45	295	296		438	499	162	25	11	7	2				1792	880.0

Gross Weight 170,000 to 200,000	Load Factor n_s (g)																			Total No. n_s	Flt. Time
Airspeed (K)	1	.2	.3	.4	.5	.6	.7	8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
100 to 150								20	21		30	24	2	1							98	33.1
150 to 200				2		1	6	82	75		122	182	48	6							524	233.0
200 to 250							6	23	25		21	52	25	6	2						160	63.3
250 to 300				1		3	8	42	30		58	80	28	13	6		1				270	126.2
300 to 350								1	1		5		2								9	6.4
Totals				3		4	20	168	152		236	338	105	24	8		1				1061	462.0

Gross Weight: 200,000 to 230,000	Load Factor n_s (g)																			Total No. n_s	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
150 to 200						1	2	13	21		27	9	2								75	37.4
200 to 250							2	8	8		15	9	1								43	17.8
250 to 300						7	21	94	100		150	159	44	6	3						584	316.9
300 to 350					1			1	1		6	6	5	2	2						24	8.9
Totals					1	8	25	116	130		198	183	52	8	5						726	381.0

Gross Weight: 230,000 to 260,000	Load Factor n_z (g)																			Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
150 to 200																						.1
200 to 250							2	2	1		3										8	1.1
250 to 300								5	5		8	5	1								24	14.3
Totals							2	7	6		11	5	1								32	15.5

TABLE 29
Walker AFB

Distribution of Primary Maneuver Load Factors by Equivalent Airspeed by Gross Weight within Altitude Range: 10,000 to 20,000 feet

Gross Weight 110,000 to 140,000	Load Factor n_z (g)																		Total No. n_z (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0		
100 to 150								2	11		4	7									24	8.9
150 to 200						2	2	21	12		13	22	2								74	42.3
200 to 250				2		3	11	41	52		69	44	15	7	3	1					248	187.3
250 to 300						1	2	9	7		25	20	6	4	1						75	41.3
Totals				2		6	15	73	82		111	93	23	11	4	1					421	279.8

Gross Weight 140,000 to 170,000	Load Factor n_z (g)																		Total No. n_z (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0		
100 to 150					1		1	1	1												4	1.9
150 to 200							1	12	17		16	21	4	1							72	55.6
200 to 250			1	1	2	1	16	83	71		91	103	42	5	2	3		1			422	429.4
250 to 300				1	2	2	22	66	66		131	112	41	21	8	3	1				480	337.5
300 to 350						3	2	4	2		12	5	6	2		1			1		38	19.0
350 to 400													1	1		1					3	.8
Totals			1	2	5	6	42	168	159		250	241	94	30	10	8	1	1	1		1019	844.2

Gross Weight 170,000 to 200,000	Load Factor n_z (g)																		Total No. n_z (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0		
150 to 200									1		1	1									3	1.3
200 to 250						2	10	52	82		128	72	22	5							373	671.5
250 to 300						3	15	63	91		138	128	49	20	3	2					512	900.5
300 to 350								3	3		13	6	3	2				1			31	19.6
Totals						5	25	118	177		280	207	74	27	3	2		1			919	1300.9

Gross Weight 200,000 to 230,000	Load Factor n_z (g)																		Total No. n_z (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0		
150 to 200								2	1		4	4									11	1.4
200 to 250						1	5	33	25		69	43	10	1							187	297.6
250 to 300						3	19	149	188		260	169	60	13	2	1	1				865	1152.6
300 to 350							5	10	11		24	9	2	1							62	39.7
350 to 400								1			2	1					1				5	2.1
Totals						4	29	195	225		359	226	72	15	2	1	2				1130	1493.4

Gross Weight: 230,000 to 260,000	Load Factor n_z (g)																		Total No. n_z (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0		
250 to 300								2	4		3			1							10	41.0
Totals								2	4		3			1							10	41.0

TABLE 30
Walker AFB

Distribution of Primary Maneuver Load Factors by Equivalent Airspeed by Gross Weight within Altitude Range: 20,000 to 30,000 feet

Gross Weight: 110,000 to 140,000	Load Factor n_s (g)																			Total No. n_s (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	
100 to 150				2		2	2	5	8		11	6									36	19.9
150 to 200						2	5	22	24		21	24	6	1							105	40.3
200 to 250					2	9	18	61	69		88	70	35	9	5	2	2				370	256.2
250 to 300					2	2	12	40	31		81	66	26	15	7	2	4	1	1	2	292	165.7
300 to 350								3	3		2	2	1				1	1			13	17.8
Totals				2	4	15	37	131	135		203	168	68	25	12	4	7	2	1	2	816	475.9

Gross Weight: 140,000 to 170,000	Load Factor n_s (g)																			Total No. n_s (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	
100 to 150								6	2		4										12	2.7
150 to 200		1	1		1	1	6	17	15		22	19	8		2						93	73.9
200 to 250					5	14	42	211	220		312	256	123	35	14	9	6	1	2	2	1250	1071.8
250 to 300	1				1	10	39	136	196		335	238	111	29	13	6	2	1			1118	1138.7
300 to 350							4	13	7		6	9	8	1	1	1	1			1	52	38.3
Totals	1	1	1		7	25	91	383	440		679	522	250	65	30	16	7	2	2	3	2525	2325.4

Gross Weight: 170,000 to 200,000	Load Factor n_s (g)																			Total No. n_s (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	
100 to 150							1				1										2	.5
150 to 200							2	3	6		9	8	1								29	31.0
200 to 250					3	6	27	210	440		351	225	72	21	9	2					1166	1992.3
250 to 300					1	3	24	155	428		513	354	134	46	18	5	3	1			1485	1921.3
300 to 350								7	5		12	6	2	3	2	2	3	1			43	33.9
Totals					4	9	54	375	479		886	593	209	70	29	9	6	2			2725	3539.0

Gross Weight: 200,000 to 230,000	Load Factor n_s (g)																			Total No. n_s (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	
150 to 200									5		1	3	2								11	6.8
200 to 250					1	2	9	70	137		197	124	57	6	4						607	865.9
250 to 300						4	14	136	186		385	246	94	18	5	3					1091	1920.5
300 to 350							3	6	16		12	12	6	9	4		1		1		70	63.1
Totals					1	6	26	212	344		595	385	159	33	13	3	1		1		1779	2856.3

Gross Weight: 230,000 to 260,000	Load Factor n_s (g)																			Total No. n_s (g)	Flt. Time (Min.)
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	
200 to 250								4	5		8	6	4	1							28	35.7
250 to 300									7		5	3	1								16	59.2
Totals								4	12		13	9	5	1							44	94.9

TABLE 31
Walker AFB

Distribution of Primary Maneuver Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 30,000 to 40,000 feet

Gross Weight: 110,000 to 140,000	Load Factor n_z (g)																				Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
100 to 150							1														1	.3
150 to 200							1	1	4		1	1			1						7	19.7
200 to 250				1	1	2	12	48	30		69	32	20	3	3		1				222	660.5
250 to 300							4	15	9		28	18	3	1	1						77	153.0
300 to 350																						1.0
Totals				1	1	2	18	64	41		98	51	23	4	5		1				307	835.1

Gross Weight: 140,000 to 170,000	Load Factor n_z (g)																				Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
150 to 200			1	2	2	1	6	13	12		19	8	5	2							71	55.5
200 to 250				2	3	9	54	232	247		455	268	97	33	8	7	1				1416	5089.7
250 to 300						1	13	48	86		131	100	51	11	4	1					446	515.6
300 to 350								3	4		3	5	3		2						20	5.3
Totals			1	4	5	11	73	296	349		608	381	156	46	14	8	1				1953	5666.1

Gross Weight: 170,000 to 200,000	Load Factor n_z (g)																				Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
100 to 150																						21.4
150 to 200							1	1	7		2	1	1	1							14	38.6
200 to 250	1				4	3	47	189	421		513	292	54	22	4	2	2	1			1555	5024.4
250 to 300					1	2	11	35	89		166	126	37	11	3	2		1	1	1	486	1188.1
300 to 350												1									1	7.7
Totals	1				5	5	59	225	517		681	420	92	34	7	4	2	2	1	1	2056	6280.2

Gross Weight: 200,000 to 230,000	Load Factor n_z (g)																				Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
150 to 200								3	3		2	1									9	3.6
200 to 250		1	1			3	13	100	209		275	139	39	7	4						791	2472.5
250 to 300						3	9	75	101		222	106	33	8	2	1					560	1760.9
300 to 350																						1.9
Totals		1	1			6	22	178	313		499	246	72	15	6	1					1360	4238.9

Gross Weight: 230,000 to 260,000	Load Factor n_z (g)																				Total No. n_z	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
200 to 250									3		3										6	12.5
250 to 300									2		1										3	13.0
Totals									5		4										9	25.5

TABLE 32
Walker AFB

Distribution of Primary Maneuver Load Factors
by Equivalent Airspeed by Gross Weight
within Altitude Range: 40,000 to 50,000 feet

Gross Weight 110,000 to 140,000	Load Factor n_a (g)																				Total No. n_a	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
150 to 200								1	2			2	1								6	16.8
200 to 250							1	3	2		6	6	2	1							21	140.9
250 to 300																						20.3
Totals							1	4	4		6	8	3	1							27	178.0

Gross Weight 140,000 to 170,000	Load Factor n_a (g)																				Total No. n_a	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
150 to 200							8	14	8		15	4	4	1							52	190.2
200 to 250				1		2	3	21	30		36	31	11								135	1007.4
250 to 300																						13.9
Totals				1		2	9	35	38		51	35	15	1							187	1211.5

Gross Weight 170,000 to 200,000	Load Factor n_a (g)																				Total No. n_a	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
150 to 200								1													1	3.1
200 to 250						1	5	9	16		33	6									70	995.4
250 to 300								1			1	1									3	3.3
Totals						1	5	11	16		34	7									74	1001.8

Gross Weight: 200,000 to 230,000	Load Factor n_a (g)																				Total No. n_a	Flt. Time
Airspeed (K)	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	(g)	(Min.)
200 to 250								6	6		8	2	1								23	124.8
250 to 300																						.6
Totals								6	6		8	2	1								23	125.4

TABLE 33

Castle AFB

Distribution of Derived Gust Velocity of Incremental Gust Load Factors
by Gross Weight by Altitude

Altitude: 0 to 1,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000										1	3	2	1								7	86
140,000 to 170,000					1	1	8	43	158	138	226	224	53	9	2	1	1				865	2324
170,000 to 200,000						5	10	59	237	312	429	422	103	21	6						1601	5442
200,000 to 230,000									23	34	15	10	2								84	201
230,000 to 260,000								1	1	4	4	5									15	80
260,000 to 290,000																						4
Totals					1	6	18	103	419	489	677	663	156	30	8	1	1				2572	8137

Altitude: 1,000 to 2,500 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000									1	1	9	1	5		1						18	152
140,000 to 170,000						3	5	61	295	369	503	347	76	15	1						1675	3106
170,000 to 200,000					2	3	11	92	430	542	709	662	197	25	4	1					2678	8412
200,000 to 230,000						1		5	25	73	62	30	6								202	354
230,000 to 260,000								1	1	12	5	1									20	117
260,000 to 290,000																						4
Totals					2	7	16	159	752	997	1288	1041	284	40	6	1					4593	12145

Altitude: 2,500 to 5,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000									5	1	5			1							12	59
140,000 to 170,000								6	25	57	53	14	3								158	638
170,000 to 200,000					1		2	17	78	150	190	106	17	5							566	2113
200,000 to 230,000								1	6	19	17	8	3	2		1					57	503
230,000 to 260,000										5											5	164
260,000 to 290,000																						7
Totals					1		2	24	114	232	265	128	23	8		1					798	3484

Altitude: 5,000 to 10,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000																						101
140,000 to 170,000									3	31	24	2									60	634
170,000 to 200,000									7	13	34	8	1								63	1169
200,000 to 230,000									2	17	10	1									30	966
230,000 to 260,000									1	7	5										13	361
260,000 to 290,000									4	5	1										10	18
Totals									17	73	74	11	1								176	3249

TABLE 34
Castle AFB

Distribution of Derived Gust Velocity of Incremental Gust Load Factors
by Gross Weight by Altitude

Altitude: 10,000 to 20,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000																						920
140,000 to 170,000								2	3	20	21	5									51	2456
170,000 to 200,000						1		2	13	26	35	13	5	1							96	5236
200,000 to 230,000							1	1	12	35	41	9	2	2							103	3306
230,000 to 260,000								1	3	10	5										19	910
260,000 to 290,000											1										1	46
Totals						1	1	6	31	91	103	27	7	3							270	12873

Altitude: 20,000 to 30,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000									4	8	3	4	1	1	1						22	2047
140,000 to 170,000									3	22	82	4	3								114	17780
170,000 to 200,000						1		3	21	48	61	13	2	4							153	16294
200,000 to 230,000								1	9	35	44	6	3	1							99	11199
230,000 to 260,000								1	1	20	16	3	2								43	3680
260,000 to 290,000										2											2	115
Totals						1		5	38	135	206	30	11	6	1						433	51115

Altitude: 30,000 to 40,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000								1		11	11		1								24	13674
140,000 to 170,000								1	6	161	127	6									301	42698
170,000 to 200,000								1	10	129	134	10	3								287	37111
200,000 to 230,000									7	101	74	1	1								184	30860
230,000 to 260,000									9	29	37	1	1								77	6166
260,000 to 290,000										3											3	985
Totals								3	32	434	383	18	6								876	131494

Altitude: 40,000 to 50,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000																						47
140,000 to 170,000										20	30		1								51	7014
170,000 to 200,000										8	4										12	4709
200,000 to 230,000											2										2	1717
Totals										28	36		1								65	13487

TABLE 35
Castle AFB

Distribution of Derived Gust Velocity of Primary Maneuver Load Factors
by Gross Weight by Altitude

Altitude: 0 to 1,000 feet

Gross Weight (lbs.)	Derived Gust Velocity U_{D_E} (Ft./Sec.) -52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	Total No. U_{D_E} (Ft./Sec.)	Distance Flown (Statute Miles)
110,000 to 140,000								1	1	4	8	4	2								20	86
140,000 to 170,000					1	2	8	25	77	64	145	244	76	12	1						655	2324
170,000 to 200,000						6	12	52	193	163	273	518	230	47	14						1508	5462
200,000 to 230,000						1	7	15	13	14	17	18	4	3							92	201
230,000 to 260,000						1	2	9	9	8	5	10	7	1							52	80
260,000 to 290,000																						4
Totals					1	10	29	102	293	253	448	794	319	63	15						2327	8137

Altitude: 1,000 to 2,500 feet

Gross Weight (lbs.)	Derived Gust Velocity U_{D_E} (Ft./Sec.) -52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	Total No. U_{D_E} (Ft./Sec.)	Distance Flown (Statute Miles)
110,000 to 140,000								1	9	14	36	10	5	2							77	152
140,000 to 170,000		1				1	15	69	253	187	432	674	251	50	5	2					1940	3106
170,000 to 200,000					1	4	27	104	546	462	1050	1331	569	197	14	1					4306	8412
200,000 to 230,000					1			5	19	51	44	39	13								172	354
230,000 to 260,000					1		1	3	9	19	15	11	1								60	117
260,000 to 290,000										3											3	4
Totals		1			3	5	43	182	836	736	1577	2065	839	249	19	3					6558	12145

Altitude: 2,500 to 5,000 feet

Gross Weight (lbs.)	Derived Gust Velocity U_{D_E} (Ft./Sec.) -52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	Total No. U_{D_E} (Ft./Sec.)	Distance Flown (Statute Miles)
110,000 to 140,000										7	9										16	59
140,000 to 170,000								4	30	58	86	48	10	4	1						241	638
170,000 to 200,000						2	3	15	102	145	219	251	85	7	1						830	2113
200,000 to 230,000				1				5	9	27	51	44	7						1		145	503
230,000 to 260,000								4	2	14	14	9	2								45	164
260,000 to 290,000																						7
Totals				1		2	3	28	143	251	379	352	104	11	2				1		1277	3484

Altitude: 5,000 to 10,000 feet

Gross Weight (lbs.)	Derived Gust Velocity U_{D_E} (Ft./Sec.) -52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	Total No. U_{D_E} (Ft./Sec.)	Distance Flown (Statute Miles)
110,000 to 140,000										6	24	4									34	101
140,000 to 170,000									9	49	58	24	3	1							144	634
170,000 to 200,000								2	10	70	107	49	10								248	1169
200,000 to 230,000					2			1	11	34	50	16	3	1							118	966
230,000 to 260,000									5	10	19	7	1								42	361
260,000 to 290,000										2											2	18
Totals					2			3	35	171	258	100	17	2							588	3249

TABLE 36

Castle AFB

Distribution of Derived Gust Velocity of Primary Maneuver Load Factors
by Gross Weight by Altitude

Altitude: 10,000 to 20,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000						1		1	6	57	65	23	3		1						157	920
140,000 to 170,000								2	16	118	149	42	6	1							334	2456
170,000 to 200,000							2	12	58	234	308	147	39	12	4	3	1				820	5235
200,000 to 230,000								3	18	95	146	54	12	7	1		1				337	3306
230,000 to 260,000									5	28	26	11	1	1							72	910
260,000 to 290,000																						46
Totals						1	2	18	103	532	694	277	61	21	6	3	2				1720	12873

Altitude: 20,000 to 30,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000								3	16	109	160	36	10	2							330	2047
140,000 to 170,000						1		5	32	404	719	145	26	8	2	2					1344	17780
170,000 to 200,000						1	2	11	79	441	807	277	69	17	3						1707	16294
200,000 to 230,000									21	263	361	150	39	4	1						839	11199
230,000 to 260,000								1	14	67	57	20	4	1							164	3680
260,000 to 290,000										1											1	115
Totals						2	2	20	162	1279	2104	628	148	32	6	2					4385	51115

Altitude: 30,000 to 40,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000						1		7	22	267	383	116	16	2	2						816	13674
140,000 to 170,000						1		14	82	764	1288	322	38	8	3	1					2521	42698
170,000 to 200,000			1					10	62	477	756	191	44	9	3						1553	37111
200,000 to 230,000						1	1	7	47	472	516	150	22	7	3						1226	30860
230,000 to 260,000									11	65	70	25	5								176	6166
260,000 to 290,000										1	2										3	985
Totals			1			3	1	38	224	2046	3015	804	125	26	11	1					6295	131494

Altitude: 40,000 to 50,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000																						47
140,000 to 170,000									9	56	90	14	2								171	7014
170,000 to 200,000								1	7	22	34	4	1								69	4709
200,000 to 230,000										6	10										16	1717
Totals								1	16	84	134	18	3								256	13487

TABLE 37

Walker AFB

Distribution of Derived Gust Velocity of Incremental Gust Load Factors
by Gross Weight by Altitude

Altitude: 0 to 1,000 feet

Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	Total No. U_{D_E} (Ft./Sec.)	Distance Flown (Statute Miles)
140,000 to 170,000									1	1	1	1									4	20
170,000 to 200,000									1	2		3									6	6
200,000 to 230,000																						
Totals									2	3	1	4									10	26

Altitude: 1,000 to 2,500 feet

Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	Total No. U_{D_E} (Ft./Sec.)	Distance Flown (Statute Miles)
140,000 to 170,000								5	35	19	31	37	10	2							139	167
170,000 to 200,000							1	9	60	37	49	72	15	6							249	199
200,000 to 230,000																						5
Totals							1	14	95	56	80	109	25	8							388	371

Altitude: 2,500 to 5,000 feet

Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	Total No. U_{D_E} (Ft./Sec.)	Distance Flown (Statute Miles)
110,000 to 140,000							9	13	64	147	246	78	5		1						557	937
140,000 to 170,000						2	11	50	332	353	499	400	77	10	7		1				1742	1947
170,000 to 200,000							9	35	187	117	188	192	44	10	2						784	1046
200,000 to 230,000			1		1	2	3	23	85	115	139	101	16	3	1						490	697
230,000 to 260,000							1	1	12	10	9	11	7								51	44
Totals			1		1	4	27	122	680	742	1081	782	149	23	11		1				3624	4671

Altitude: 5,000 to 10,000 feet

Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	Total No. U_{D_E} (Ft./Sec.)	Distance Flown (Statute Miles)
110,000 to 140,000							1	13	80	228	252	53	13								640	1716
140,000 to 170,000						4	10	103	454	686	900	356	66	8	3						2590	3317
170,000 to 200,000						1	4	15	130	253	307	142	18	4							874	2069
200,000 to 230,000							1	12	96	261	292	104	18	2	1						787	2144
230,000 to 260,000									2	16	9	5									32	89
Totals						5	16	143	762	1444	1760	660	115	14	4						4923	9335

TABLE 38
Walker AFB

Distribution of Derived Gust Velocity of Incremental Gust Load Factors
by Gross Weight by Altitude

Altitude: 10,000 to 20,000 feet	Derived Gust Velocity U_{DE} (Ft./Sec.)																			Total No. U_{DE}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000								2	5	30	30	9	2	1							79	1460
140,000 to 170,000							3	7	45	194	180	43	7		1						480	5147
170,000 to 200,000								2	13	115	83	4	1								218	8062
200,000 to 230,000						1	1	5	40	192	198	31	6	2	2						478	9624
230,000 to 260,000							1	3	10	22	21	5	1								63	267
Totals						1	5	19	113	553	512	92	17	3	3						1318	24560

Altitude: 20,000 to 30,000 feet	Derived Gust Velocity U_{DE} (Ft./Sec.)																			Total No. U_{DE}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000								1	2	14	18	2	2								39	3234
140,000 to 170,000								2	18	89	72	18	4	1							204	16789
170,000 to 200,000						4	2	9	31	188	179	29	8	4							454	25767
200,000 to 230,000							1	6	53	404	424	41	9	2							940	21298
230,000 to 260,000										4											4	701
Totals						4	3	18	104	699	693	90	23	7							1641	67789

Altitude: 30,000 to 40,000 feet	Derived Gust Velocity U_{DE} (Ft./Sec.)																			Total No. U_{DE}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000									3	70	37	1									111	6804
140,000 to 170,000									17	235	168	10	1								431	46533
170,000 to 200,000									19	180	205	7	3								414	52566
200,000 to 230,000								1	8	160	189	6	1								365	35993
230,000 to 260,000										5	3	1									9	221
Totals								1	47	650	602	25	5								1330	142117

Altitude: 40,000 to 50,000 feet	Derived Gust Velocity U_{DE} (Ft./Sec.)																			Total No. U_{DE}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000										1	13										14	1794
140,000 to 170,000									3	64	25	1	1								94	10461
170,000 to 200,000										13	11										24	8980
200,000 to 230,000										1											1	1179
Totals									3	79	49	1	1								133	22414

TABLE 39
Walker AFB

Distribution of Derived Gust Velocity of Primary Maneuver Load Factors
by Gross Weight by Altitude

Altitude: 0 to 1,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.) (Statute Miles)
140,000 to 170,000							3			1		3	2	1							10 26
170,000 to 200,000											1	2									3 6
200,000 to 230,000										1											1
Totals							3			2	1	5	2	1							14 26

Altitude: 1,000 to 2,500 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.) (Statute Miles)
140,000 to 170,000									12	8	16	22	17	9	1						85 167
170,000 to 200,000								4	15	12	22	54	30	10							147 199
200,000 to 230,000									1	1			2								4 5
Totals								4	28	21	38	76	49	19	1						236 371

Altitude: 2,500 to 5,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.) (Statute Miles)
110,000 to 140,000							5	13	71	108	176	157	53	7	1						591 937
140,000 to 170,000					1	2	12	58	174	159	302	432	164	49	10	3	1				1367 1947
170,000 to 200,000					1	2	14	36	94	62	150	285	124	58	10	2					838 1046
200,000 to 230,000					1	10	27	43	87	75	118	124	60	8	1						554 697
230,000 to 260,000					1	1	4	2	4	5	6	6	5	1							35 44
Totals					4	15	62	152	430	409	752	1004	406	123	22	5	1				3385 4671

Altitude: 5,000 to 10,000 feet	Derived Gust Velocity U_{D_E} (Ft./Sec.)																			Total No. U_{D_E}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.) (Statute Miles)
110,000 to 140,000						1	2	26	157	241	374	181	56	10	1						1049 1716
140,000 to 170,000				1	1	1	12	55	232	327	500	415	148	43	4						1739 3317
170,000 to 200,000				2		2	5	31	154	152	252	250	144	42	7	3					1044 2069
200,000 to 230,000				1			6	26	74	161	252	129	34	8	1						692 2144
230,000 to 260,000								2	6	7	12	3	1								31 89
Totals				4	1	4	25	140	623	888	1390	978	383	103	13	3					4555 9335

TABLE 40
Walker AFB

Distribution of Derived Gust Velocity of Primary Maneuver Load Factors by Gross Weight by Altitude

Altitude: 10,000 to 20,000 feet	Derived Gust Velocity U_{DE} (Ft./Sec.)																			Total No. U_{DE}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000							2	6	14	124	138	29	9								322	1460
140,000 to 170,000					2		5	8	51	274	324	138	29	8	3	3					845	5147
170,000 to 200,000							2	8	55	234	351	113	38	7	3						811	8062
200,000 to 230,000							1	15	94	318	416	125	47	6	2	1					1025	9624
230,000 to 260,000								1	1	4	3			1							10	267
Totals					7		10	38	215	954	1232	405	123	22	8	4					3013	24960

Altitude: 20,000 to 30,000 feet	Derived Gust Velocity U_{DE} (Ft./Sec.)																			Total No. U_{DE}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000				2	2	2	2	6	40	189	239	67	23	7	3		1				583	3234
140,000 to 170,000			1	1	1		6	26	105	595	811	242	69	26	9	3	3				1898	16789
170,000 to 200,000							7	13	94	672	996	294	96	33	9	1					2215	25767
200,000 to 230,000						1		11	66	461	668	241	72	15	6	1					1542	21298
230,000 to 260,000									3	11	14	8	3	1							40	701
Totals			1	3	3	3	15	56	308	1928	2728	852	263	82	27	5	4				6278	67789

Altitude: 30,000 to 40,000 feet	Derived Gust Velocity U_{DE} (Ft./Sec.)																			Total No. U_{DE}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000								3	9	72	70	13	3	1							171	6804
140,000 to 170,000			1		1	2	4	6	75	479	602	145	28	8	1						1352	46533
170,000 to 200,000		1					3	14	73	543	763	139	32	6	4	3	1				1582	52566
200,000 to 230,000				1	1		1	9	58	380	491	104	31	8	1						1085	35993
230,000 to 260,000										5	4										9	221
Totals		1	1	1	2	2	8	32	215	1479	1930	401	94	23	6	3	1				4199	142117

Altitude: 40,000 to 50,000 feet	Derived Gust Velocity U_{DE} (Ft./Sec.)																			Total No. U_{DE}	Distance Flown
Gross Weight (lbs.)	-52	-47	-42	-37	-32	-27	-22	-17	-12	-7	7	12	17	22	27	32	37	42	47	52	(Ft./Sec.)	(Statute Miles)
110,000 to 140,000									1	5	10	2									18	1794
140,000 to 170,000							1	1	12	50	56	15	1								136	10461
170,000 to 200,000								1	5	23	24										53	8980
200,000 to 230,000									1	9	9	1									20	1179
Totals							1	2	19	87	99	18	1								227	22414

BIBLIOGRAPHY

1. Titus, Edwin, Maneuver Load Data from Jet-Trainer Operations, Wright Air Development Center Technical Note 59-33, ASTIA Document Nr. AD-216306, Wright-Patterson AFB, Ohio, May 1959.

2. Titus, Edwin, Maneuver Load Data from T-37 Trainer Operations, Wright Air Development Division Technical Note 60-124, ASTIA Document Nr. AD-242550, Wright-Patterson AFB, Ohio, April 1960.

3. Wells, Jr., Harold M., Structural Flight Loads Data from Project Head Start, Wright Air Development Division Technical Note 60-125, Wright-Patterson AFB, Ohio, May 1960.